



A Pointer to PROSPERITY

GREAT SALT LAKE ROUTE.



ONLY TRANSCONTINENTAL RAILWAY PASSING DIRECTLY THROUGH SALT LAKE CITY, AND REACHING INTO THE MOST FERTILE DISTRICTS OF THE GREAT NEW STATE OF UTAH.

A FEW FACTS ABOUT
THE
CLIMATE
AND
RESOURCES
OF THE
NEW STATE
OF
UTAH

WHICH WILL INTEREST THE
FARMER • FRUIT-GROWER
STOCKMAN
AND OTHERS

EDITED AND ISSUED BY THE PASSENGER DEPARTMENT



SALT LAKE CITY, UTAH
1896

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UTAH

To the well and the sick, the rich and the poor,
To the seekers for homes and to "folks on a tour;"
To the farmer who is bound to escape, once for all,
From the regions of earth, where the rains seldom fall;
To the genius who seeks opportunities rare
For putting himself out of the reach of "dull care;"
To the miner who looks into nature's broad breast,
For the means to give life its full measure of zest;
To the man who "has money," and is anxious to know
Of a place in the West where his money will grow;
To the maid from whose cheek the roses have fled,
And who longs for a dip in the sea that is dead;
To the wise and the foolish, the high and the low,
To "sinner and saint," to the fast and the slow;
To the World's swarming millions—whatever their state—
This volume of "Pointers" we here dedicate.

Introductory

WITH A VIEW to placing the resources of the great and marvelous State of Utah before that army of homeseekers and settlers whose attention has been directed westward toward "the Promised Land," and to concisely and correctly place before them a few facts concerning the wonderful fertility of its soil, its healthful climate and the abundance of its natural resources, this little pamphlet has been prepared.

The statements found herein are facts, having been gathered with care and accuracy direct from the producer and from the statistics in the possession of the Chamber of Commerce, Salt Lake City, and the Utah Bureau of Statistics.

It will not be the purpose, in this issue, to deal with the vast and limitless mineral resources of the State, the advantages of its commercial situation, the opportunity for the inauguration of manufacturing enterprises, nor to dwell upon the indisputable beauty of its mountains, lakes and streams—except as these particulars are detailed in the county reports hereinafter mentioned.

Those who have been fortunate enough to investigate the advantages of this abiding place can quickly realize the significance of the word "Utah," when coupled with the three great prizes of the world, "Health, Wealth and Happiness." As Health and Happiness are related to each other in the supreme successes

of Life, so is the magnificent empire of Utah linked with the greatest of its public highways, the Rio Grande Western Railway—tersely termed the “Great Salt Lake Route.” The progress of that railroad has noted the progress of the State; its enterprise has marked the enterprise of the people; its interests and those of the people it serves, are identical. Starting, as it does, on the dividing line between Colorado and Utah and extending westerly and southerly, past the shores of Utah Lake—a magnificent sheet of fresh water—and the Great Salt Lake, or “Dead Sea of America,” to within a few miles of the border lines of Nevada, Idaho and Arizona, the Rio Grande Western Railway taps the most fertile and productive valleys of Utah. It runs along in close company with the mountain streams that furnish water for the numerous irrigation enterprises throughout the State, which serve the purposes of the abandoned rain-maker and more—in so far as they supply the water when and where needed, and fresh from its mountain sources.

A comfortable journey over the lines of the Rio Grande Western Railway in Utah will better acquaint you with the wonderful resources of that great State than any amount of literature that can be gathered on the subject. But herein are a few facts, which will serve as a forerunner of information and give you a preliminary taste of the many good things in the Promised Land which will be yours when, after your pilgrimage of inspection, Utah's glories are unfolded to you and you make your home within it.

The New State of Utah

"The Promised Land"

ITS PHYSICAL FEATURES AND GEOGRAPHICAL POSITION

ITS EDUCATIONAL SYSTEM, ETC.

Utah occupies an important position in the Trans-Missouri group of states, being situated between the parallels 37° and 42° north latitude, and the meridians of 109° and 114° west of Greenwich. It is 275 miles in width and 345 miles in length, and adjoins the states comprising the Inter-Mountain Empire—viz: Colorado, Wyoming, Idaho, Nevada, Arizona and New Mexico. Its land area is 84,970 square miles, or 52,601,600 acres; its water area is 2,780 square miles, or 1,776,200 acres. It is larger than the combined area of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New Jersey and Delaware; and there is no region of equal area on the globe that overflows with more abounding and diversified riches of resource and possibility. As a whole, Utah is a vast, habitable domain, beautified by clusters of snow-capped mountains and enriched by the productive qualities of its broad, sweeping valleys, these latter capable of producing all the necessities, and most of the luxuries of life. A hundred streams or more, which find their sources in the snows of the eternal mountains, wind through its innumerable verdant vales and open, prolific prairies, furnishing easy sustenance for a large population, of which but the vanguard has yet located itself in this land of health and plenty.

It has a number of fresh-water lakes of considerable size, and that wonderful inland sea, the Great Salt Lake, is a far-famed feature of its topography. About one-half of the great new State

lies on the west side of the Wasatch Mountains, which splendid range of sloping hills and mountains sweeps almost through its center, thus dividing it into two equal sections. The Uintah range cuts the State in its northern half. A greater portion of the western section constitutes the fruitful area of the Great Basin—that strange region whose waters are lost in the earth and never reach the sea. The eastern half is drained into the Colorado River, which follows a course through the southeastern corner of the State and into Arizona. In the northeast corner of the new State, in Uintah County, and immediately tributary to the line of the Rio Grande Western Railway, lie the Uintah and Uncompahgre Indian Reservations—soon to be thrown open to settlement, and concerning which we will have something to say in the review of the State by counties, which will be found in the latter part of this book, and to which we direct all homeseekers and interested persons for specific information, with respect to results obtained by the farmer, stock raiser, fruit grower, etc., etc.

But, before passing to the next chapter, a word or two upon the educational and school system will not be amiss—every homeseeker is interested in the education of his children—and nowhere is there a system so universally conceded to be competent and complete as in Utah. There are public schools in every community, free to all, and regulated by able and progressive supervision. The school buildings are new and commodious, well ventilated and lighted; the instruction, the best that experience has ferreted. In Salt Lake City all text books and necessary supplies are furnished by the city, so that poverty is no excuse for lack of education. There is no interference with the public school system by any powers outside of the Board of Education, which, officially, is non-sectarian and non-political. The schools are open to everyone and as free and pure as the air we breathe.

Climate

ITS INFLUENCE AND ADVANTAGES

Climate, as we now understand it, is evolved in certain conditions of heat, moisture, atmosphere, soil, wind, topography of the earth's surface—each exerting a potential influence, each acting its part, and, as a whole, giving to the climate its salient features in accordance with nature's known laws; for, is it not a fact that climate is governed in its changes and conditions, first, by the position of the sun relative to the earth? second, through the inclination of its rays to the earth's surface? and third, is it not affected in its quality whether at sea-level or at varying altitudes above sea-level?

We have in Utah, or more particularly, in the Great Salt Lake Basin, a climate peculiarly local, and of a quality conducive to good health and long life. It possesses the dryness, elevation and tonicity of the air essential to the comfort and enjoyment of the hale as well as to the restoration of the invalid.

Added to the other manifold blessings enjoyed by those who dwell amid the valleys and mountains of Utah, they can, when in health, work harder and accomplish more with less wear and tear than anywhere else on the habitable globe. With a fair endowment of brains and working capital they can think faster; with brawny arms and inherent energy they can expend more force with less fatigue, and render by sundown a day and a quarter for a day's work without unusual effort. The property of exhilaration, born of purity and rarity of our atmosphere, is an ever constant factor. Coming here from other localities, there is an increase in the force of circulation and in the normal oxidation of the blood, together with a stimulus of the respiratory sense, and general improvement in the body nutrition. The summer heat is not debilitating. The dry, pure air and the cool invigorating nights enable us to maintain health throughout the year. Indeed, as a people we can retire to refreshing sleep to waken with renewed life and energy to begin another day prepared for the grand struggle of life. The people of Utah are as robust and long-lived as any in the world.

No region excels ours in natural advantages for the well-being of its citizens. We have a great inland sea rolling at our feet possessing inherent virtues in its waters essentially tonic and invigorating to the general system. We have thermal springs of varying degrees of temperature and of varied properties; we have the sunshine peculiar to a dry climate and we thrive upon it; the sunshine coming to us through a clear pure atmosphere reflects cheerfulness and makes the world smile. We live in nature's sanitarium subjected to healthful influences and dwelling under a cloudless sky. Our most favorable climatic properties are dryness, coolness and equability. Dr. Standart claimed our ideal climate to consist in the varied topography of this inter-mountain region. The cool fresh air of the mountains, light and pure; the peculiar local atmosphere of the Great Salt Lake; the distance inland; the sheltered situation of our valleys; their elevation above sea-level, all combining to create what many travelers have found here, "the most unique and wonderful climate on the face of the globe."

We have no cyclones, blizzards, sand-storms, tornadoes nor earthquakes. The velocity of the wind is less in winter than in summer. This is true of no other place in the United States except San Francisco. The average velocity of the winds per hour is 5.2 miles. In Boston it is 9.2; in Sandusky, Ohio, 12.8; St. Louis, 9.8; Cheyenne, 10.6; Denver, 6.3; San Francisco, 9.3. High winds are very rare, the highest velocity on record in Salt Lake City being but forty-eight miles per hour. In many eastern cities it reaches sixty and seventy miles per hour quite frequently. There are no damp winds. The relative humidity is 48.3 as against Los Angeles 66, New York 68. Therefore a low temperature is not uncomfortably cold or penetrating, and a high temperature is not oppressive. Sunstrokes are unknown, malaria is extremely rare, and the winter days, however cold, are invigorating. The highest temperature on record was in August, 1875, 101°, the average highest temperature for fourteen years being 96°. But the dry and absorbent nature of the air moderates the effect of such hot days. In autumn the climate of Utah is simply unapproachable in all the qualities that make weather delightful—clear, sparkling and bracing. From September until Christmas the sun shines perpetually, and out-door exercise is delightful. The annual average mean range of temperature is 51.5°; the average monthly range is 47.5°, and the average daily range is 18.6°. The records show that the extreme yearly range of our temperature is oftener

less than 90° than it is more than 100° . It has exceeded 100° but three times in twenty-four years.

But the pride of our climate, and the feature in which it excels all others in America, is its equability. There is no other region as dry and as elevated as this where the daily range of temperature is so small. Equability has been regarded as belonging exclusively to low and moist localities, and variability as a distinguishing attribute of all high and very dry places. The valleys of Utah range from 4,300 to 6,000 feet in altitude, but higher altitudes are in easy reach by ascending any one of the hundreds of beautiful cañons that abut upon the valleys. It has been clearly pointed out that bacteria breeding disease exist in the greatest number at low altitudes, and at high elevations they do not live. The dryness is about the same as Denver, but the daily range of temperature is much less than in any other elevated regions—at least in the United States. It is not the cold winter-time, nor the hot summer-time, that tries the health of human beings, but it is the sudden and extreme changes of temperature that are so hard to bear, and which wreck the health. It takes several days for the temperature to change 40° , while there are places in the East where such a change takes place in an hour or two. There is scarcely any dew in this country, so that the nights are as dry as the days. We have no rainy season, but we have showers all through the summer. We have no fogs nor drizzling rains, nor fierce and cold winds, and, on the average, 315 days out of the year are clear and fair.

Physicians recommend this climate particularly for those suffering from pulmonary diseases, which cannot exist here except in a relieved and modified condition. Dr. Niles has covered this feature thoroughly, not only by his own extended observations, but by conference with others. He states: "The most rapid and satisfactory results have been noticed in that largest class of American invalids, whose deteriorated health and loss of nervous, mental and physical vigor has been caused by overwork, worry, mental strain, etc., and which, without any recognizable specific cause, exhibit various distressing symptoms or functional disorder, such as neuralgia, sleeplessness, dizziness, mental depression, weak digestion, disturbance of the circulation, etc. .

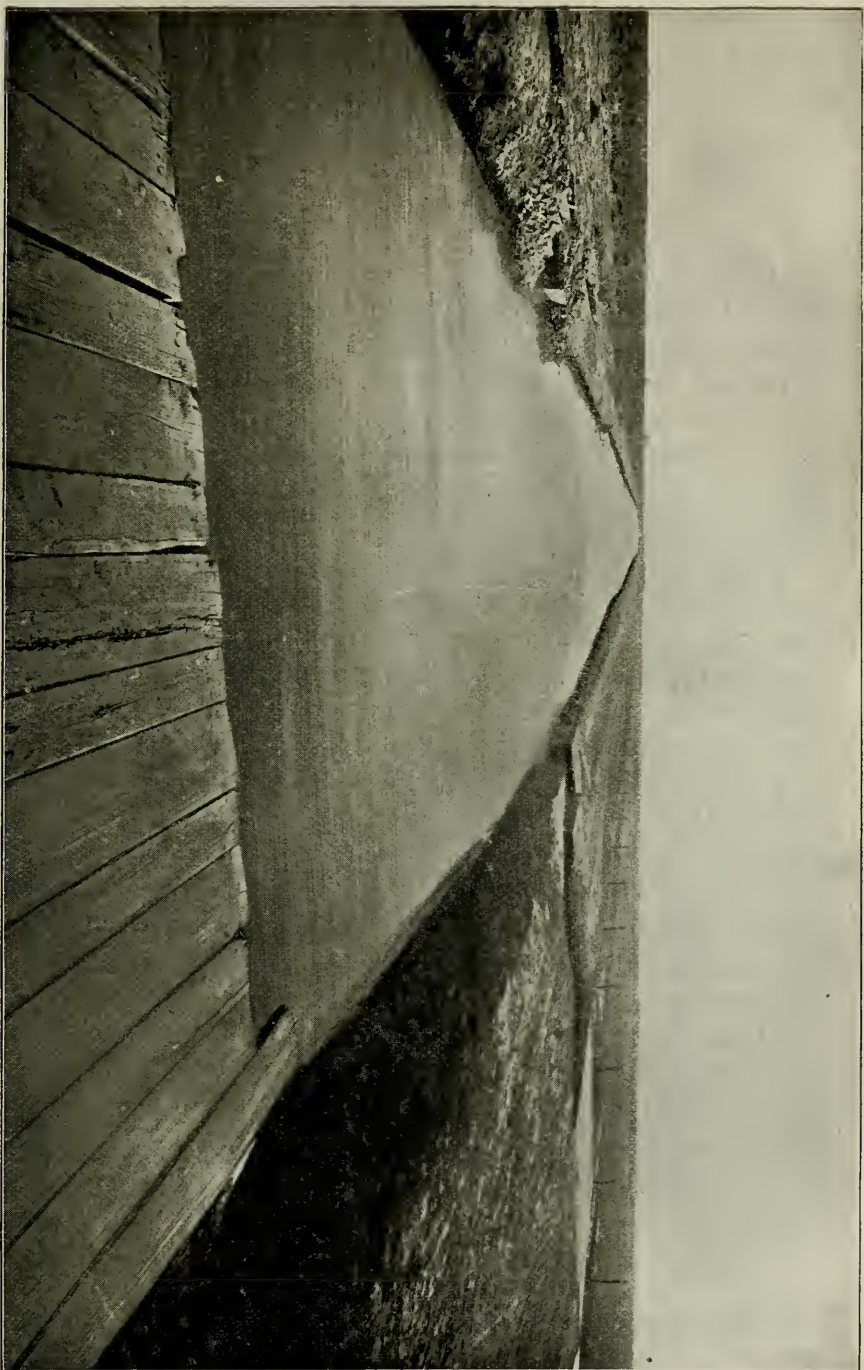
"As might naturally be expected, these troublesome patients usually respond promptly to the pleasant and complete change, and to the invigorating influence of this climate.

"It is in the preventative and curative treatment of diseases of the respiratory organs, however, that this climate has attracted the most attention, and, perhaps, deserves the greatest credit.

"Chronic catarrhs of the nose, throat and bronchial tubes are favorably influenced from the first; but it is in the earlier stages of phthisis that the greatest power of these natural therapeutic agents are manifested. Many authentic instances are recorded where the progress of the disease has been checked (even after cavities have been formed or repeated hemorrhages have occurred and the patient's general health restored. Some of the leading insurance companies, realizing these facts, take some risks (who have a tendency to lung trouble) on condition that they maintain a residence here.

"Visitors from a lower altitude, suffering from asthma, are usually promptly relieved by a residence here. Those suffering from chronic rheumatism, unless complicated by valvular deposits, are improved by the use of the springs, aided by the tonic air. The good results observed in all of those maladies dependent upon passive congestion of any of the internal organs (liver, kidneys, uterus, brain, etc.) are doubtless, in a large measure, due to the potent influence of the lessened atmospheric pressure in strengthening and equalizing the blood circulation and the alterative effects of the sulphur springs water. This high, dry, cool air is unfavorable for the production and development of germ diseases, and this state is freer from these diseases than other cities of the same size."

The pure sparkling water which flows from the snow beds on the mountain ranges has much to do with preserving the health of our citizens, as there is no possibility of its contamination such as takes place in the large slow-flowing rivers of most other countries.



MAIN CANAL AND LATERALS, IN UTAH.

Irrigation

SOME PRACTICAL INFORMATION

Frequent inquiries indicate a widespread desire to learn something of the practical methods and results of irrigation. The vast injury which has been suffered throughout some parts of the West during the past few years, and from which Utah has been free, quickens the public interest in a system of crop culture, which is of comparatively recent growth in this country, although taking the world at large, the cultivation by irrigation antedates that depending upon the annual rainfall.

In the early history of irrigation in this country the lands were over-watered, but experience has shown that irrigation is most successful when the least amount of water is used necessary to a vigorous growth of the crops; that is, a greater yield is obtained by avoiding both scanty and excessive watering; but the tendency to over-water the lands is corrected only by extended experience. A great many of the waterways are so rudely constructed that much waste ensues. As irrigating methods are improved this wastage will be avoided; so that in assuming that a cubic foot of water per second will irrigate an average of 100 acres of land, it is at the same time assumed that only the necessary amount of water will be used, and that the waterways will be so constructed that the waste will be prevented.

Whatever conditions-future developments may bring about, the present water supply in Utah is surface. It depends largely upon the fall of snow in the winter, and to a slight degree upon the rainfall during the spring and fall months; as a consequence the character of the water supply is largely found in the mountain streams.

THE METHODS OF IRRIGATION

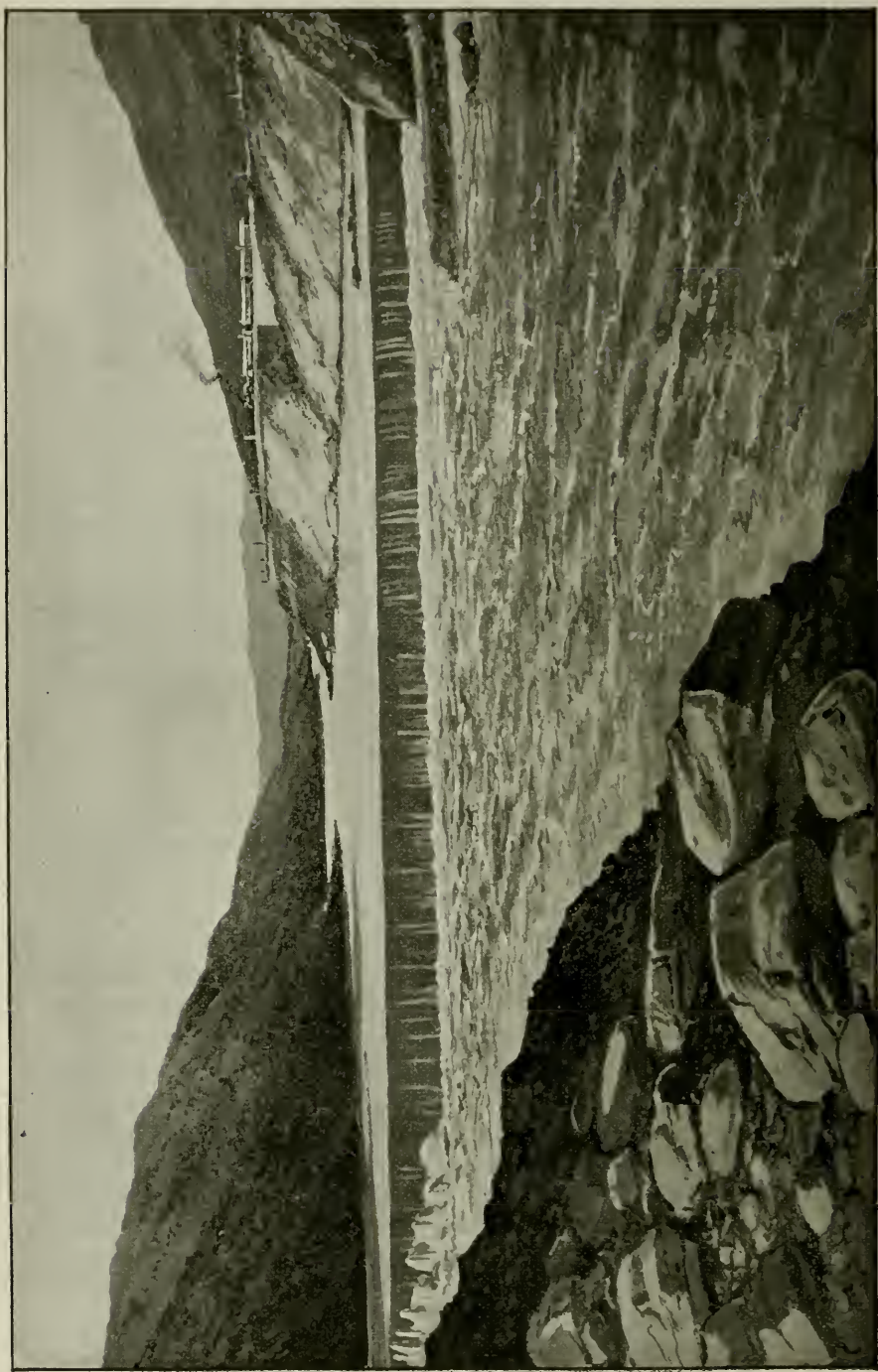
The system of irrigating the soil is by means of canals, which are run from the large streams carrying sufficient water to irrigate

vast tracts of land; or the mouth of cañon streams are dammed as reservoirs. The canals are then subdivided into branch canals, and these again divided into laterals leading to every farm so long as there is water to be distributed. Each farmer has canals leading from the main one to every field, and generally along the whole length of the upper side of each field. Each field has little furrows, a foot or more apart, and parallel with each other, running either lengthwise or crosswise or diagonally across as the slope of the land requires. Into these furrows the water is turned, one or more at a time, as the quantity of water permits, until it has flowed nearly to the other end, when it is turned into the next furrows, and so on until all are watered.

This is the usual custom, but where the soil is made of clay, this method is not so good and another is used. This latter method is to throw up little embankments six inches high around separate plats of land that are of uniform level, and turn the water in until the plat is full to the top, when the water is drawn off to the next lower plat and so on to the end. This enables the water to soak in more and so does the crop more good, but where the soil is porous, as is frequently the case, it is not so good a method, as it wastes water.

COST OF IRRIGATION

The average first cost of bringing water on to the land is about \$10 per acre for the entire State. The average value placed by the farmer upon such water right is \$27 per acre. The average annual cost of maintaining this water right throughout the State is ninety cents per acre. The average first cost of land and water is about \$27 per acre; and the average annual value of production is \$18, as against \$13 for New Mexico and \$14 for Arizona. In the way of a comparison with localities where irrigation is not used, the plan is not expensive. How many farmers in the East would hesitate to pay \$3.00 an acre to insure a crop every year? And yet the total cost in Utah, under the irrigation process, whereby a full crop is insured every season, is much less than this, and your water right is becoming more valuable yearly. Another thing, irrigated land does not deteriorate in quality; the water carries to it elements which restore or add to its fertility. It yields prompt returns from the labor or fertilizers put upon it. In a word, irrigating pays where it is practicable as in Utah, and is properly done.



BEAR RIVER DAM, IN UTAH.

CANALS AND IRRIGATING ENTERPRISES

Utah occupies a central position in the arid region and its details of irrigation possess unusual interest; the farmers having introduced methods of their own and achieved success after repeated failures, they are now well able to instruct the rest of America in this new art. Until a few years ago no attempts had been made to divert large streams for irrigation purposes, the capital required being greater than the farmers could gather together; but now in San Pete and Sevier Counties, on the line of the Rio Grande Western Railway, capital has been secured to construct various reservoirs capable of storing sufficient water to irrigate thousands of valuable acreage. One company alone has constructed a reservoir covering 40,000 acres, and has already completed a large canal, many miles in length, to irrigate a tract containing some 200,000 acres of fertile land, which, but for this enterprise could never be cultivated. In Weber County, near Ogden, in Utah and Juab Counties, near Goshen Station, and in the eastern part of the territory, in Grand and Carbon Counties, on the line of the Rio Grande Western, various strong enterprises have been inaugurated which have been the means of reclaiming vast areas of productive land, and which will soon be the means of supporting many hundreds of earnest and law-abiding settlers. Through the Salt Lake Valley a large irrigating ditch or canal may be seen from the car window as it follows the railroad in its approach to Salt Lake City, and which supplies water to a domain extensive in area, rich in quality and fruitful in results. This same land without the benefits of irrigation would be valueless as a means of production.



WHEAT FIELD, IN UTAH.

Agriculture

SOME WONDERFUL RESULTS

The extraordinary natural fertility of the soil of Utah renders any scientific methods of development unnecessary. The soil is charged with natural fertilizers, rich, deep and vigorous, seeming anxious to respond to the efforts of the husbandman when once the life-giving waters are spread upon its surface. There has never been a ton of artificial fertilizer brought to this State to our knowledge. The soil is charged with calcium-phosphate and other chemicals which nature requires to invigorate and sustain the fruits of the field. That subtle something, which replaces the missing ingredients in the soil, is supplied in the waters of irrigation.

This is being more and better appreciated as time goes on. Alkali lands are caused from an excess of plant food, and they are becoming so understood. Granite, feldspar, porphyry and limestone, of which the mountains are formed, are prolific sources of potash and soda. Carbonate of lime, also essentially a plant food, and ammonia, are both abundant.

The cultivated districts of Utah are in the valleys and lie between the mountain ranges throughout the whole of the State. It is true that in the western parts there are so-called desert regions, but so much has been done in the past few years to conquer the deserts of the Great Basin, and so many instances are at hand where lands once desert are now yielding abundant crops, that it is not safe to say that any land in this State is truly of a desert nature. The drive-well has invaded the arid regions, and wherever its waters can be made to flow, there the land makes most bountiful returns and yields up the substance of the field. The quality of the product is, in many instances, beyond comparison with any other, not always as to appearance, but usually as to real merit and fine flavor. A review of the reports from the different counties of the State, as published in the latter pages of this work, will show the astonishing variety of agricultural products produced in each county of Utah; and it will be further noted that the range of products is different in the southern counties to that in the northern,

These are the general facts regarding the agriculture of this favored State, but some remarkable and unique features will be noted in the detailed accounts which follow.

GRAIN

WHEAT—The soil and climate of Utah are well adapted to the cultivation and growth of wheat. The latest official returns, gathered with great care and accuracy, showed an average yield per acre of twenty-two bushels in 1894. The United



BARLEY FIELD, IN UTAH.

States report for the same year shows 17.2, and the Agricultural College report shows an average from irrigated lands to be twenty-nine bushels in 1894. The real quality of the grain is equal to that of any grown in America, but in appearance it is not so plump as that of California, though brighter and larger than most wheat grown in the East. There is no steady export of Utah wheat, but occasionally we send it to Colorado and further east, and have more than once exported it to England. The annual production approaches 3,000,000 bushels. Utah wheat received an award at the World's Fair. Under our system of irrigation and consequent high cultivation, the yield per acre in exceptional

instances has been astonishingly great. In 1889 the American Agriculturist offered a prize of \$500 to the farmer raising the largest crop of wheat to the acre in any place in the United States. This prize was secured by William Gibby, who produced 4,806 pounds of clean wheat, being eighty bushels and six pounds, from one acre of ground, accurately surveyed, on the outskirts of Salt Lake City. The crop came up in the middle of February, 1889, and received no attention until April 10th, when it was rolled once. No other care was given it until harvest time, and the prize acre received no



OAT FIELD, IN UTAH.

different treatment than the general wheat crop on the farm, the entire yield of which averaged seventy bushels to the acre. One bushel and one peck of seed was sown to the acre. The only fertilizer used was good stable manure. Careful farmers have kept a record of their time actually employed in wheat raising and have found that they have been able to make as high as \$10 a day for the season. There are a number of small farms throughout Utah that have produced as high as sixty bushels to the acre year after year.

Some attention has recently been given, with great success, to the growth of Egyptian seven-headed wheat, which yields sixty to seventy bushels to the acre, with comparatively little care.

OATS—Those who keep up work horses are willing to pay twenty-five to thirty per cent. more for Utah oats of ordinary quality than for a fair grade of eastern. Utah oats, therefore, command a good price, and when the market favors export a comparatively high figure is asked and received. The grain is handsome, heavy and full of meat. We have some 35,000 acres of oats under cultivation, with an average yield of thirty-four bushels per acre, worth \$600,000. Large farms have been known to realize eighty-five bushels to the acre. Although last year's yield was rather less than usual, we have authentic



CELERY FIELD, IN UTAH.

instances of from seventy to eighty bushels to the acre. Average yield, per acre, thirty bushels in 1894.

BARLEY—There was no barley exhibited at the World's Fair equal to that produced in Utah. Our barley has always been considered superior to any other produced in the United States. It is very heavy—fifty to fifty-five pounds to the bushel—thin-skinned and in every way superior. The white club variety is largely grown for brewing purposes, and is in demand throughout the East in competition with the best Canadian. The annual crop approximates half a million bushels, the largest product being

in Utah County. Some of the southern counties produce the highest average to the acre, that of Garfield County fifty-two bushels, while the general average, in 1894, throughout the entire State was thirty-one bushels. The price is usually about fifty cents per bushel.

CORN—Although Utah does not pose as a corn country, in 1894 there were 13,893 acres under cultivation. The hot sultry nights which corn requires are not characteristic of our climate, but in some of the southern parts excellent crops are produced. The entire yield in 1894 was 260,697 bushels, valued at \$151,433.



SUGAR BEET FIELD, IN UTAH.

RYE—Comparatively little is cultivated in Utah, although the quality is superb and the yield above that of the average for the United States. In 1894, an acreage of 3,791 yielded 42,352 bushels, valued at \$20,094.

SUGAR BEETS

Investigation having shown that Utah, with a soil and climate perfectly adapted to the growth of sugar beets, was yearly paying abroad about \$1,000,000 for sugar. A company, called the Utah Sugar Company, was recently organized with ample

capital; the shares subscribed, the subscriptions called in, and a plant costing, altogether, \$400,000, and capable of handling daily 350 tons of beets and turning out forty tons of refined sugar, has been put in near Lehi, Utah County, thirty miles south of Salt Lake, and for the greater part of three years has been running to nearly its full capacity. The sugar is the finest grade of granulated, has a slightly reddish tinge, and its sweetening qualities are equal to the best. It is now to be found in nearly every grocery store and on nearly every table in Utah.

The Sugar Company issued a circular urging farmers to grow sugar beets, and offering to pay \$4.50 per short ton of beets delivered at the factory. This is the highest price paid for beets in any part of the world. A man who understands himself can grow thirty tons per acre on good ground having sufficient water, and at a cost not greatly exceeding that of an acre of corn. This industry opens a new and considerable source of revenue to the already fortunate farmers of Salt Lake Valley and other parts of Utah. It will take, perhaps, 5,000 acres to feed this mill, and Utah consumes the utmost sugar output of three or four such mills. In 1894 there were 3,056 acres in beets which produced 380,015 tons, valued at \$166,714.

GRASSES

ALFALFA—This is one of the most important crops of Utah. It can be grown on rough ground that is too dry for grass and too broken and stony for grain. The cultivation of alfalfa, or lucern, has proven one of the greatest blessings enjoyed by the farming people of Utah. Excellent crops have been secured by merely clearing off the brush and casting the seed over the ground. It takes longer to get a good start this way, and it is more difficult than if the ground is stirred or broken, but it thrives better in the end. Alfalfa will do well on ground that is too steep for a mowing machine if only sufficient water can be got to it to give it a start. Such land would require twenty-five pounds of seed for timothy, but for the raising of alfalfa, not over five pounds of seed is required. In the second year it will self-sow thinly. It does not thrive on cold and wet ground. The first season it should be cut as often as it is high enough to do so; the second crop will afford a little hay; the third cutting about half a crop, making about one whole crop for the season. The second year it will be as good as it ever becomes, and will give

three strong crops, yielding on the average four or five tons to the acre. Sometimes eight tons per acre can be secured. The average in Emery County, in 1894, was six tons to the acre. Utah County produces the greatest quantity, nearly fifty thousand tons. More or less alfalfa is grown in every county of the State. 163,544 acres are now under cultivation. Alfalfa once planted needs no re-sowing; it is cut each time when it is well out in blossom. In exceptional cases one seed has been known to throw out 500 shoots, all that a strong man can lift. When left for seed it sometimes reaches a height of six feet. The



CABBAGE FIELD, IN UTAH.

quality of alfalfa seed raised in Utah is beyond comparison with that of any other region known. Many carloads are annually exported. In California and elsewhere there is a steady demand for it. Utah alfalfa seed secured first prize at the World's Fair, and this has done much to stimulate export trade. The market for this year makes the growing of alfalfa highly profitable. In the dry sand hills a good crop of lucern hay can be cut in June; then in the dry summer a lesser crop matures, which is harvested for seed, and being more sparsely grown than if irrigated, it is better for that purpose. A good average yield of seed from such

lands would be 600 pounds to the acre, worth about forty dollars. Alfalfa, like all other forage grasses, cures quickly in this climate and retains its color and flavor to a remarkable degree.

HAY—Clover, timothy and redtop hay are grown in all parts of the State. Hay cures beautifully and retains its nourishing quality better in this State than elsewhere, owing to the dry atmosphere. Statistics show a yield of 3 2-10 tons to the acre. Utah grasses exhibited at the World's Fair were pronounced beyond comparison with any others shown in the Agricultural Building.

VEGETABLES, ETC.

The Utah potato is justly famous all over the United States. The annual product is something over a million and a half bushels; its average being 168 bushels in 1894. As high as 800, and even 900 to the acre, have been recorded. The late Secretary Rusk said: "Utah beats the world for potatoes." The manufacture of starch from Utah potatoes would prove successful.

Utah has also a fine reputation for carrots, which sometimes yield, of good quality, as much as 1,800 bushels to the acre; also for onions, turnips, parsnips, radishes, etc.

We annually export large quantities of cabbage, cauliflower and celery, the latter growing exceptionally fine; and for home consumption we raise an abundance of beans, peas, lettuce, cabbage, squash, tomatoes, asparagus, etc. In the production of these garden stuffs Davis County takes the lead. Peanuts could be grown to advantage in this State, our climate and soil being especially favorable. Tobacco, flax, hops, sorghum and other miscellaneous crops have not been rightly cultivated but could be produced to advantage. In the southern part of the State cotton is very successfully raised. It averages 600 pounds to the acre, which is an enormous yield, the average for the Southern States being usually about 170 pounds.



PRUNE TREE--3 YEARS OLD--IN UTAH.

Fruit Culture

A GROWING AGRICULTURAL PURSUIT

The same causes which give excellence to the grains and vegetables of Utah also stand for orchard products of a high class. Fresh fruits are exported in considerable quantities, and wherever sent take a high place and command a ready sale. In general terms, the superior characteristics are firmness, beauty, and above all, fine flavor.

Nearly every county in the State produces fruit, Utah County most of all, Weber and Davis following closely. A rising fruit district is that in the extreme eastern part of the State just after crossing the Colorado-Utah line. In Washington County figs, pomegranates, grapes and other semi-tropical fruits thrive to perfection, though they are too far from the railroads to meet with a ready market. With reasonable care peaches are raised in all the lower altitude valleys to advantage. They are shipped, wrapped and unwrapped in boxes of about twenty pounds each, and find a ready market in Colorado and elsewhere. Our peach trees thrive best on light, loamy and gravelly soil. Apples are better and becoming more plentiful every year. Great quantities are raised in Weber and Utah Counties and shipped from Ogden, Salt Lake City, Provo and Springville to the markets of the East and North. The principal varieties for export are the fall Pearmain and Rhode Island Greening, but among the last and very best to come into market are the Winesap and winter Pearmain, which keep far into April and are generally conceded to be of better flavor than those from the East.

Plums, German prunes, pears, apricots, cherries and grapes, of splendid quality and handsome appearance, are raised in great quantities; strawberries and raspberries are both native to Utah; also red and black currants; under cultivation the yield is very large and of surprising quality. In the height of the season, strawberries come to market in the greatest abundance, of magnificent appearance and fine flavor.

Stock-Raising

A PROFITABLE PURSUIT

One of the chief pursuits of Utah is that of stock-raising. In the small space that this volume can devote to it, it is almost impossible to give to the inquiring stranger a comprehensive report on the subject. With low warm valleys in a high state of cultivation, with rolling hills and vast plains or prairies, this favored State, "the home of the Rio Grande Western Railway," is an ideal point in which the stock-raiser can profitably carry on his business. The hills and mountains are covered with bunch grass protected by native timber and watered with abundant streams. It is in these high hills that the ranchmen summer and fatten their cattle and sheep. The ranges are absolutely free and unlike most of the Western States, the best land has not been taken up by large corporations. The methods followed by the smaller ranchman of the State are simple. He turns his cattle in with those of his neighbor, they being identified by a recorded brand; perhaps there will be fifty different lots owned by many different people. In the spring-time this herd is taken to the high hills in the East; they are then left to roam at will over the unoccupied country, with the care, perhaps, of one or two men. In the fall of the year, after the first snow storm, these cattle will drift towards home of their own accord, and it becomes a simple matter to gather them; they are then identified and claimed by their various owners, and the expense of herding and gathering pro-rated among the various owners on the basis of the number of cattle owned by each one to the total number summered. These cattle are then in good shape to be marketed. A great many ranchmen, instead of shipping their cattle off the grass in the fall, take them up, when in good flesh, and turn them on their alfalfa fields to eat the third crop of this wonderfully nutritious grass; when the frost strikes these pastures the cattle are fed alfalfa hay, which, unlike any other hay, produces fat beef for the winter and spring markets.

CATTLE—To give the prospective settler an idea of the returns of stock-raising, some actual figures will not be out of place here. The railway rates to the Missouri River and Chicago markets are

reasonable and the service excellent. The entire expense of marketing at the Missouri River, on an average, is about \$6.75, which includes all charges for freight, feed and commission. Even with the unsatisfactory markets of '95, the Utah cattle brought from \$3.00 to \$3.50 per hundred pounds for range steers, and from \$2.50 to \$3.00 for cows, netting the owners from \$25 to \$30 for their three-year-old steers, and from \$15 to \$20 for their cows. In the winter and spring-time there is enough demand in the larger cities of the State to take all the cattle that are hay-fed throughout the State. There has hardly been a winter of which we have record that fat hay-fed steers, weighing from 1,000 to 1,200 pounds, did not bring \$3.50 per hundred pounds, and fat cows \$2.50 to \$3.00 per hundred pounds in Salt Lake or Ogden. On a basis of four months feed it will take two tons and a half of alfalfa to the steer, or \$12.50 in hay and labor, rating the hay on a basis of \$5.00 per ton fed to the animal. Intelligent ranchmen will see at a glance that such prices, in event of the steer weighing 1,200 pounds, which is a moderate weight for four month's feeding, will net to him \$29.50; and where he does his own labor, give him \$5.00 a ton clear for his hay, in his own yard. The above is conservative and careful estimate, the weight of the cattle being put at a low point.

It is a mistaken idea that people with small capital cannot go into the cattle business; to prove that such is the case, we have prepared a couple of tables. The first shows what can be done with a small bunch of yearling steers, handled on the range in the summer and fed over two winters, and yet allow the ranchman to engage in other pursuits.

100 yearling steers at \$12.50.....	\$1,250.00
Interest at 8 per cent., first year.....	100.00
Cost of hay to winter same, first year.....	250.00
Second year's interest.....	128.00
Hay (second winter) and feed.....	300.00
Total.....	\$2,028.00

These cattle will sell when hay-fed through the winter at a better price than those allowed to run at large on the winter ranges, will give better weight and greater satisfaction, and we can figure that they will net \$30 for the shipper, leaving a profit for him of \$972 on his transaction of two years. By handling them in this way there is absolutely no loss.

Transaction number two might be called a "cow deal."

100 cows and calves at \$18.00.....	\$1,800.00
First year's interest at 8 per cent.....	144.00
Hay, first winter.....	300.00
Total.....	\$2,244.00

These 100 cows the first year, taking the natural average of cows and steer calves, will result in

50 yearling steers at \$12.50.....	\$ 625.00
50 yearling heifers at \$10.00.....	500.00
Total.....	\$1,125.00

Giving a return of \$1,125 on the investment of \$2,244 and the original property on hand.

SHEEP—If the cattle business in Utah can be called a desirable proposition for parties with small capital, it is a hard matter to find the adjective suitable to apply in case of the sheep business. Utah is better fitted for sheep-raising on a profitable basis than possibly any other section of country in the United States. Her topography is such as to make it the wool-growers' natural home. The choicest flocks of lambs and mutton wethers are raised and fattened in Utah on native grasses only, and exported alive to Europe. The mountains are comparatively free from brambles and brush, and the flocks lose less wool on this account than in other districts. The usual methods of handling sheep in Utah are simple enough. In the fall of the year, as soon as the snows commence to come, and the late rains produce water in the arid districts, the flock-master dips his sheep and starts his flocks to the western desert, which in reality is the winter feeding ground, annually, of millions of sheep. This section is comparatively low in altitude, covered with various nutritious forms of vegetable life found in the arid regions, and an ideal country in which to winter sheep. In the spring of the year the flock of sheep will be started on its journey to the summer range on the high mountains, perhaps 150 miles away, where they will find a lambing ground and shearing corrals. They are taken higher into the mountains as the season advances. When the late fall is reached the herder will find himself in the possession of a bunch of prime sheep ready to be shipped to market, or to be carried through the winter as may seem best.

The man of small capital may fear that he is shut out of this enterprise for lack of means, but the following table taken from an actual transaction would lead one to think otherwise. All the labor necessary in this particular bunch of sheep was done by a ranchman and his boy fifteen years of age, the amount of capital invested being \$2,000, as follows:

1,000 yearling ewes at \$1.75.....	\$1,750.00
Wagon and horses.....	100.00
Supplies.....	100.00
Dipping, etc.....	100.00
Interest at 8 per cent.....	120.00
Total.....	\$2,170.00

These ewes were bought in the fall of the year, and within twelve months the following returns were made:

8,000 lbs. of wool at 7 cents.....	\$ 560.00
1,000 lambs at \$1.50.....	<u>1,500.00</u>
Total.....	\$2,060.00

A clear amount of \$2,060 the first year on an investment of \$2,170, with the original property yet in hand.

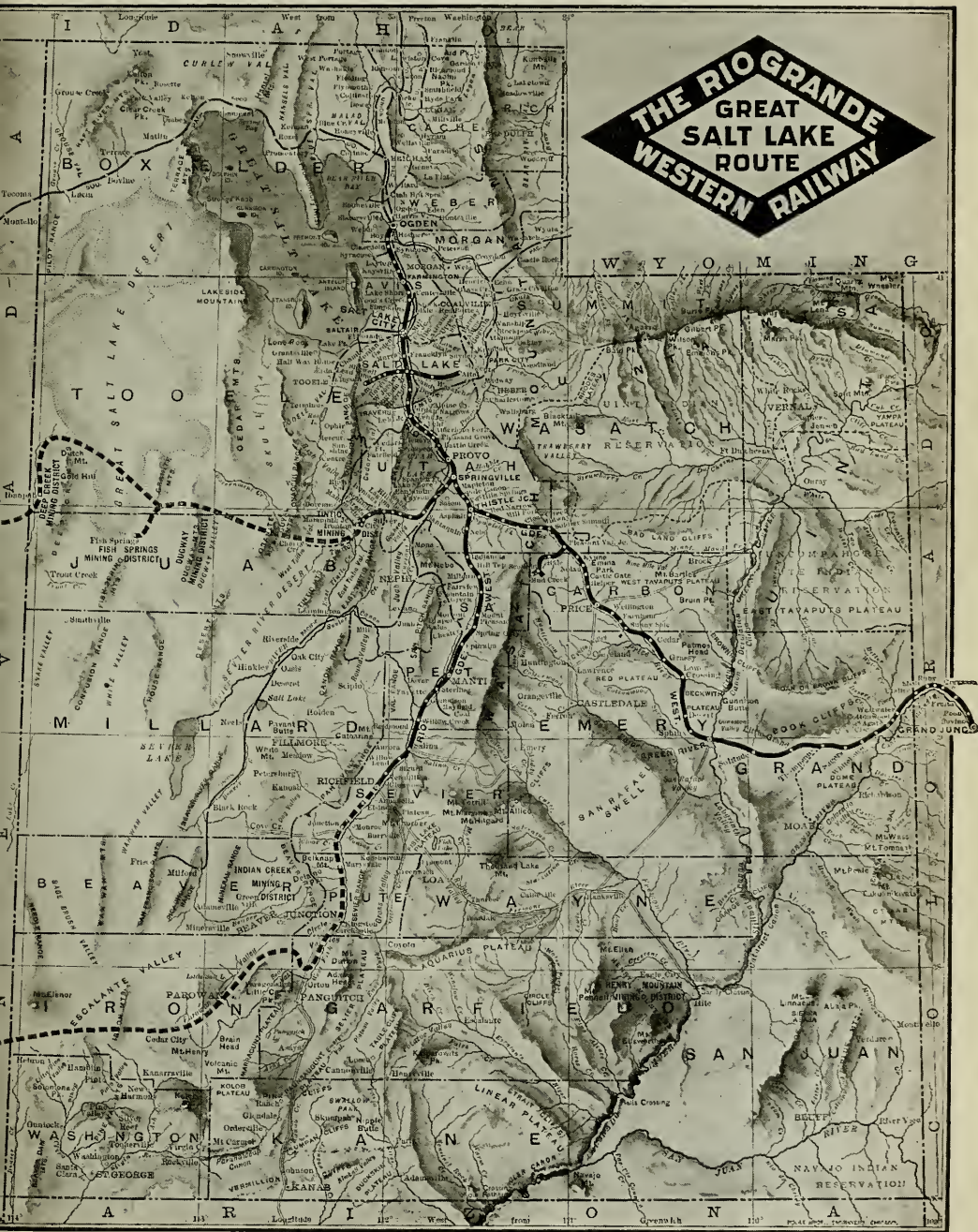
Hogs—There are not enough hogs raised in Utah to supply a quarter of the demand in Ogden and Salt Lake City. One of the largest wholesale merchants of Salt Lake City states that over 8,000,000 pounds of pork were imported into Utah in 1895, mostly from Kansas and Nebraska. In 1894 there were but 47,703 swine in the entire State, and considering the fact that the supply is inadequate to even the local consumption, and that the best fattening feed is cheap, it has always been a mystery why hog-raising has not been indulged in to a greater extent. Those who are at present interested in this pursuit, and having given but ordinary attention to it, have profited largely on their investment. Several small ranches are now in operation, and it is but safe to conclude that greater attention will be paid to the raising of swine in the future.

OTHER LIVESTOCK

In 1894 there were 99,895 horses, 1,308 mules, 835 asses and 2,966 goats in the State. Of the latter, one half were raised in Kane County.

The Counties of Utah

The data, from which the following descriptive articles are prepared, has been gathered from reliable sources, and in many instances the matter has been submitted by representatives especially appointed for the purpose by the County Courts.



UTAH, THE FORTY-FIFTH STATE.

Reference to the above map will be a valuable aid to the homeseeker while considering the special county matter, found in alphabetical order in the following pages.

BEAVER COUNTY

Beaver County is situated towards the southwest portion of the State, extending from the Beaver range of mountains to the Nevada line. The western portion lacks moisture, but the eastern half is well watered and most fruitful. The Wasatch Mountains at this point are magnificent and lofty, supplying Beaver River with numerous tributaries, and securing facilities for irrigation to a large farming population. The average altitude of the agricultural land is about 6,000 feet. Alfalfa and small grains are the principal crops, but in some localities there are a few orchards. About 2,000 acres are in wheat, which has an average yield of eighteen bushels; the rest being in corn, barley, lucern, hay, potatoes, etc. 323,000 acres of land have been surveyed in Beaver County. It has a great variety of mineral resources and contains several mining districts. Its county seat, Beaver City, is one of the principal cities of the South; other towns in the county are Greenville, Adamsville and Milford. The town of Frisco has proven one of the productive mining camps of Utah. Besides the silver and lead-producing mines of Beaver County there have been discovered, though but little developed, a number of material resources that may yet be made to sustain an industrial population. Pure silica sand, suitable for glass-making, is one thing; another is a really beautiful quality of white marble found near Frisco. From this deposit blocks of any desired size can be quarried at a low cost. The population of Beaver County is 3,550, the assessed valuation being \$1,220,900.

BOX ELDER COUNTY

Box Elder County, situated in the northwestern part of Utah, has a population of more than 8,000 people. It has under cultivation 35,000 acres of land, 18,000 of which are irrigated.

The great Bear River Valley is located in this large county, in which the largest canal constructed in the rocky-mountain country, for irrigation purposes, has been in operation for some four years. The canal is one of the largest in the United States, and that the system is complete and efficient is sufficiently indicated by the fact that the company owning this canal was awarded the first prize at the Columbian Exposition for producing the best system of irrigation works in America.

Commencing at the Bear River Cañon and running through the valley the canal extends, with its main lateral ditches, some

150 miles through an even tract of fruit and agricultural land. The valley covers 150,000 acres of choice land, nine-tenths of which are especially adapted to the growth of the pear, peach, plum, cherry, prune, apple, apricot and all manner and kinds of smaller fruits and berries.

The water supply from the great Bear River is practically unlimited, there being a much larger amount of water available for irrigation purposes than there is land in the valley to irrigate.

Some four years ago the company owning this canal, to demonstrate the value of its lands and their adaptability to growing various grains and fruits grown in the temperate zone, planted out a small orchard of peaches, cherries, pears and apples upon its Riverside Farm, two miles from the City of Corinne; and in the fall of '95, when the trees had three years' growth, many of the fruit trees were so laden with fruit that it was necessary to prop them up to prevent the branches from breaking down.

In the spring of '95 the company was so well pleased with the result of this experiment that 40,000 young fruit trees were set out in one body in the valley; and the spring of '96 will see not less than 100,000 more trees set out upon lands owned by the company and those who have purchased in the valley.

The company, while owning some 50,000 acres of land and this large canal, are prepared to sell permanent water rights at a very reasonable figure and on easy terms, to those who are prepared to come upon the land and help to improve the country.

In the year '95, upon the various farms owned and controlled by the company, about 1,000,000 bushels of grain were raised, making it necessary for the company itself to build the first grain elevator in Utah. This is located in Corinne and has a capacity of 75,000 bushels.

The Bear River Valley is located from 800 to 1,500 miles nearer eastern markets for the shipment of fruit than points in California, with which this country comes into direct competition.

Considerable attention is also paid to small farming, dairying, cattle and sheep-raising. The latter industry is of special importance, and the sale of wool and mutton is one of the greatest sources of revenue in the county. The western portion of the county is especially adapted for grazing of sheep in the winter, and at this time it is estimated that not less than 100,000 sheep are wintering there.



Castle Gate.

CASTLE GATE, IN UTAH.
ON LINE OF THE RIO GRANDE WESTERN RAILWAY

The assessed valuation of property for the county for 1894 is as follows:

Real Estate.....	\$1,429,627.00
Improvements, including Railway and Telegraph.....	2,230,344.00
Horses, sheep, mules, etc., etc.....	625,258.00
Total.....	\$4,275,229.00

CACHE COUNTY

The county consists of one magnificent valley bordered by high mountains, which are well timbered, and are snow-clad throughout the greater part of the year. From the cañons of these mountains flow generous streams, which give to the whole valley an abundance of water, so that the people are thrifty and well-to-do. There is very little land unoccupied, although probably 50,000 acres more might be cultivated. Six bounteous streams cross the county from east to west, while hundreds of natural springs rise in all parts of the valley. Several hundred flowing wells add to the water supply for market-gardening. Wheat, rye, oats, corn and potatoes can be raised in this county without irrigation. Wheat easily yields fifty bushels to the acre, and the hay crop is astonishingly great, while alfalfa flourishes luxuriantly. Potatoes and other vegetables yield large crops and are not to be excelled in quality by any in the United States. Fruits, including apples, pears, plums, grapes, strawberries, raspberries, etc., are raised in all parts with profit, and with very little care.

The altitude of Logan is 4,400 feet, and the mean temperature for 1894 was 51.27°.

CARBON AND EMERY COUNTIES

These two counties were originally but one, under the name of Emery, but at the last session of the legislature a division was made at the intersection of Green River and the third standard parallel south, giving to the northern half the title of Carbon County, the southern half retaining the original name of Emery County. Both of these counties are reached only via the Rio Grande Western Railway, and are drained principally by Green River. In Carbon County there are but 7,679 acres of land under cultivation, with 10,301 acres of unimproved land. In Emery the cultivated acreage is 12,694, and 28,574 unimproved. Of these 20,000 acres under cultivation, the greater part is irrigated, and a much larger area will shortly be under cultivation, as an

abundance of water can be taken from Green River and more can be stored in the mountains to the westward. Not a fourth of the land that is susceptible to cultivation by irrigation has yet been checked off Uncle Sam's books. There are thirty-two irrigation systems owned exclusively by ranchers, with enough water to cultivate several counties. The soil in the bottoms is especially adapted to the production of grains, while on the benches it is particularly fit for fruits, vegetables, etc. The most important point is the town of Price, an active shipping point from which supplies are distributed to Fort Duchesne, Ashley, Vernal, and other places to the north, and also to Castle Dale and the farming districts to the south. The town of Helper is an active railway town, and the great coal fields of Pleasant Valley are situated in the northwest corner of Carbon. At Castle Gate and Scofield, coal is mined to supply the entire State and a good portion of the West. Eighty-two coke ovens may be seen from the track. A considerable business is done in lumbering, in charcoal burning and in the coke industry. The population of the two counties is about 7,000, and the assessed valuation \$2,040,812. A very large area of the best cattle and sheep-raising country is comprised within these counties, the high mesas affording excellent feed in summer and the lower valleys constituting one of the best winter ranges in the State.

These two counties present splendid opportunities to the settler and trader, for with the opening of the Indian reservations, Price station will be the main point of entry and shipment. The lands in both Carbon and Emery are rich in quality, and with the aid of the irrigation system this is a choice section of the State.

DAVIS COUNTY

The land area of Davis County may be less than that of any other county in the State, but there is no more important district in Utah. It lies between the eastern shore of the lake and the Wasatch Mountains, between Ogden and Salt Lake City, and is traversed by the Rio Grande Western Railway its entire length. Nearly the whole of its 250 square miles is under cultivation. The romantic feature of its topography is that it includes Church Island, one of the largest and most interesting islands of the Great Salt Lake. On this island there are thirty-six sections of land used for ranging purposes, a considerable portion of which is already seeded to lucern, for which it is well adapted; as also for dry farming.

It is likely to be used as a summer watering place. A large portion of the mountainous district on the main land has been taken up for range purposes. Some good timber also flourishes on these portions, but the long wide strip of land lying between the mountains and lake is exceedingly fruitful and is being cultivated to the highest degree. It is estimated that 62,400 acres of land are used for pasture, wheat, lucern, hay, barley, oats, orchards, potatoes, corn, beets and all varieties of vegetables. But little land remains subject to entry, the situation being too valuable to remain unclaimed. Cultivated land in this country is worth as high as \$300 per acre, according to quality and location, the most valuable being in the market-gardening district of the southern portion of the county. In the northern portion there is a considerable area of high land, on which extensive experiments in dry farming have been made with greater success than in most parts of the State. Davis County has done much to prove the great possibilities of farming in Utah under high cultivation. Located in a district where a ready market is assured, not only in the principal cities at home, but by reason of its railroad facilities, an extended market is open to it in the surrounding territories. It is upon the southern portion of this county that Salt Lake City depends for the splendid garden produce and small fruits which come into its market early in season and throughout the summer.

GARFIELD COUNTY

This county is situated in the central southern part of the State in the midst of the wild, weird mountains and plateaus that drain into the Colorado. It is but sparsely settled, remote from travel and comparatively undeveloped. Only a couple of thousand acres are under cultivation, but these yield high average crops. Barley, for instance, produces, on the average, fifty-two bushels to the acre against an average for the State of only twenty-nine bushels. Other cereals are produced in proportion. The county is composed for the most part of high plateaus and mountain ranges, deeply cut cañons, which rarely open to a sufficient width for agricultural operations; but the county is well adapted for sheep and cattle-raising, especially in winter. In the western portion of the county, however, along the east and west forks of the Sevier, there are several thriving farming towns, among them, Panguitch and Orton, and the country there is more open and suitable for cultivation. A year or two ago much attention was

directed to the eastern portion of Garfield County by the Henry Mountain gold excitement. It was sufficiently proven that paying placer fields existed in this region, but its remoteness and the difficulty of procuring water, except by heavy outlays, have been the principal reasons why this excitement has subsided.

GRAND COUNTY

Grand County adjoins Colorado in the middle eastern part of the State. It was but little known until it was traversed by the Rio Grande Western Railway on its course. It is sparsely populated and but little developed, although at Westwater a small ditch has been constructed and several water enterprises are in course of consummation at various points along the line of the railroad. The Grand River runs through it, but as yet only a limited area has been cultivated. Its principal use at present is for range purposes, but several small settlements, such as Moab and Richardson on the Grand River, have proven the fruitfulness of the county. Not only grain is raised, but the orchards and vineyards are remarkably productive. Only 3,850 acres are under cultivation, but 500,000 acres are reported as open for reclamation, while two and a half millions of acres are suitable for range and pasture. A great agricultural future is undoubtedly in store for Grand County, and it will probably become the principal corn producing district of the State. 245 acres are in orchards, and a shipping business of no mean proportions has already begun, from Thompson's Station, of peaches, apples, apricots, plums, pears and honey, sent in boxes to the mining districts of Colorado and to Salt Lake City. The report includes a product of 12,500 lbs. of honey, twenty-five gallons of wine, 375 hives of bees and 75,000 pounds of wool shipped, and an export of nearly 5,000 cattle and horses, and over 1,000 sheep. Shipments from this county have also been made of asphaltum, agates, ores and minerals of 40,000 pounds. Such activity as this maintained by a population of not over 750 people indicates that Grand County, with its splendid ranges and pastures, watered by the great rivers of the Grand and Green, will develop very rapidly, and at this time it probably offers better inducements for settlement than any other county in the State.

IRON COUNTY

It is situated in the southwestern part of Utah. Its area is about 3,400 square miles, a large portion of which is now being

utilized for grazing purposes. The fine pasturage afforded by the native bunch-grass and other hardy varieties that cover the mountain slopes, and even the great desert, has made stock-raising a valuable industry in Iron County. Great numbers of horses and cattle are driven or shipped eastward every year, and, with the thousands of pounds of wool exported annually, furnish one of the most important sources of revenue to the county. The Wasatch Mountains, along the eastern border of the county, densely covered with large forest trees, afford every facility for the production of millions of feet of lumber, accessible to the inhabitants of the valleys. The settled portion of the county lies along the western base of the mountains, a distance of fifty miles. The cities of Iron County are Parowan, Cedar, Paragonah, Kanarra, Summit, Enoch and Hamilton's Fort.

In Iron County there are 225,860 acres of surveyed tillable land, 22,000 acres under cultivation, 201,860 acres subject to homestead and desert entry and 2,000 acres entered, but not patented. All the land in the valleys can be utilized for agricultural purposes by means of reservoirs and artesian wells, the latter now being used very extensively. The opportunities for building reservoirs are numerous and extensive, making it possible for the uplands at the foot of the mountains to be irrigated; in consequence of which the lowlands sub-irrigate, making very profitable hay ground. Rush Lake Valley, forty-five miles long by ten wide, lies immediately south and west of Parowan Valley. In this valley are found the thriving towns of Kanarra, Enoch, Hamilton's Fort and Cedar City. The land is well watered and exceedingly productive. The Northeast Canal & Reservoir Company are taking out a canal from Coal Creek, near Cedar City, which will carry sufficient water to irrigate 2,400 acres of upland, and 1,000 acres of hay land.

The average price of cultivated land throughout the county is \$25 per acre. Its chief products are alfalfa, wheat, oats, barley, potatoes and apples. Alfalfa predominates; five tons to the acre are produced yearly, selling at \$5.00 per ton. The average yield of wheat is thirty bushels per acre, and of oats thirty-five bushels per acre.

JUAB COUNTY

This county, situated in the center of the western side of the State, consists of a long narrow strip, extending westward from the Wasatch Mountains across the desert to the Nevada line.

The greater portion of the western district is almost entirely without water and a part of it is covered by the Great Salt Lake Desert; nevertheless it affords winter range for innumerable sheep, which are able to find moisture sufficient for their needs among the gorges of the desert ranges which break across the plains in lines from north to south at intervals but a few miles apart. Not only does the arid region contribute in this manner towards the wealth of the sheep owners, but in these desert ranges already mentioned there are mines which will undoubtedly contribute largely in the future towards the mineral output of the State. In the Dugway, Fish Springs and Deep Creek mining districts are numberless lodes of lead, silver, gold and copper that have attracted the attention of mining speculators for a great many years. The eastern part of the county, however, is of an entirely different character, well watered by numerous streams, and a great part of its area has been under cultivation for many years. The property of the Mt. Nebo Irrigation Company, commencing at Goshen in the adjoining county, extends into Juab County. Their reservoirs will supply water to vast acres of good land which heretofore has been undeveloped. The celebrated Tintic mining district, of which Eureka is the most prominent camp—and into which the Rio Grande Western Railway has built one of its most important branches, is one of the greatest producers of the State. In this county is located the famous Camp Floyd Gold District, better known as Mercur “The Johannesburg of America.” It promises, by constant development, to be one of the largest gold-producing camps in the world. Salt springs and great reefs of rock salt, in the neighborhood of Nephi, afford the means of sustaining two active and successful producers of dairy salt of singular purity, besides which great quantities of rock salt for stock purposes are shipped throughout the intermountain region. The assessed valuation of the county is \$2,427,328, but it must be remembered that the mining properties are not subject to assessment. These have a value of many millions.

KANE COUNTY

This county adjoins Arizona on the central-southern portion of the State, but is remote from travel and its population does not exceed 2,000. A few towns, Kanab, Glendale, Mount Carmel and one or two others, exist on the head waters of the Rio Virgin and other streams which flow into the Colorado River. The

greater part of the county consists of plateaus, suitable for sheep ranges, but the streams flow through deep gorges cut through the alluvial soil at such depths that the water cannot be diverted to the main land. The scenery of this region is wild and romantic, and full of interest to the explorer, yet this feature does not contribute to its prosperity. The valleys to which water can be brought are narrow, limiting the arable land; but in such places farms are very fruitful and the yield is correspondingly high. The assessed valuation of the county in 1894 was \$732,520, but the livestock owned by its inhabitants is worth not less than half a million.

MILLARD COUNTY

Out of 400,000 acres of tillable land in this county, about one-quarter is under cultivation, the remainder being unoccupied and subject to entry. But fully one-half of the western portion is desert and suitable only for winter range. Cultivated land is worth from \$20 to \$50 per acre, lying along the valley of the Sevier and on the western slopes of the Wasatch Range. Good reservoir opportunities exist which might materially increase the cultivated area. The largest yields reported to the acre are five tons of hay, fifty bushels of wheat, fifty-five bushels of oats, 100 bushels of barley and 500 bushels of potatoes. The climate is temperate and cattle and all kinds of grazing stock do well. It is a region to which hundreds of thousands of sheep are driven in the winter, a circumstance which contributes as much to the good fortune of sheep raisers from other counties as to the well-being of the inhabitants of Millard County. Lead, silver, gold and copper seem to predominate, and promise to make the mining interests of the county important in the future. Fillmore, Kanosh, Scipio, Deseret and other towns supply a thriving farming population. The residents of the county number over 4,000; the assessed valuation last year was \$1,678,947. Cattle and sheep constitute its principal exports.

MORGAN COUNTY

This little county occupies a district in the northeastern part of the State. It is extremely mountainous in character, but the Weber Valley, with its several towns, Morgan, Peterson and Croyden, is a delightful relief, and the limited amount of land which there is under cultivation yields good returns. Wheat, oats, barley, potatoes and some small fruit, are the principal

products, and of these over 7,000 acres are under the plow. The towns being within easy reach of Ogden and Salt Lake City, the produce of the county is easily marketed at good figures. Cultivated land is worth \$75 and more per acre. Of late years many silver-producing claims have been recorded and some ore has been shipped. With the restoration of the price of silver and lead, further developments would begin at once. Some gold prospects have also been discovered. The population is about 2,000 and the assessed valuation about \$600,000.

PIUTE COUNTY

This is one of the small counties of the State in the south central part. It is almost wholly covered by high mountains, the Wasatch at this point reaching an altitude of nearly 12,000 feet. But for its distance from railway communication, Piute County would become prominent for its mines, some of the most promising properties being located near Marysville, to which point a branch line of the Rio Grande Western is now in the course of construction. Between Salina, the present terminus of the railroad, and Richfield and Marysville, are large tracts of government land subject to the homestead entry. Splendid opportunity for intending settlers. Gold, silver, lead and copper will some day be produced there in great quantities. At this point also quicksilver has been produced in paying quantities, the output for one year being over \$7,000. From an agricultural point of view the western portion of this county is conspicuous, the building of the Rio Grande Western extension bringing the product close to market. Population 2,500.

RICH COUNTY

This county lies in the northeast corner of Utah. It is not very large, and most of the agricultural land is already taken up. 30,000 acres are cultivated or in pasture, the tributaries of Bear River furnishing an abundance of water. The elevation of Bear Valley is about 7,000 feet, rendering the climate somewhat cold, but the hardier crops flourish. A beautiful feature of the northern part of this country is Bear Lake, a magnificent sheet of water about fifteen miles in width by thirty or forty in length. This is one of the largest bodies of fresh water which exists at such elevation in the mountain regions, and is the natural reservoir upon which the great Bear River Canal in Box Elder County depends for its perma-

nent summer supply. The scenic features of this portion of the county are exceedingly attractive, and some of the towns lying along the shore of the lake are almost wholly supported by trout fishing, supplying the markets of the surrounding country with large and splendid fish. The lake is deep, wonderfully clear and a marvel of beautiful color. At the southern end are Laketown, Meadowville and other thriving farming settlements, while along the eastern bank of the lake, at points where the mountains recede from the shore, the recesses are occupied by some of the most delightful farms in the State.

SALT LAKE COUNTY

Greater and better crops have never been raised in America than on the farms which lie in this county to the southward of Salt Lake City. The marvelous Great Salt Lake, famous among all travelers, is another feature of the valley, and its unequaled bathing affords a principal source of pleasure to its people. The principal resort, known as Saltair Beach, is a magnificent structure of Moorish design, extending into the lake for a distance of 2,000 feet. The population of the county is set at 70,000, the greater part of them residents of the capital city. Salt Lake County has an area of only 784 square miles, but it is an empire within itself, and the center of interest to the whole State. It has more manufacturing interests located within its boundaries than all the rest of the inter-mountain country combined, and has an assessed valuation of \$48,467,854. Although its manufacturing and commercial interests predominate, the agricultural features of the county are by no means insignificant. Over 27,000 acres of land are under irrigation and 30,000 under cultivation, and, generally speaking, it is high cultivation. Besides this, there are 15,000 acres used for pasture. The agricultural yield is valued at \$792,242. On the day that the valley was first entered, July 24, 1847, the first furrow was plowed in the Great Basin, and that year the agricultural possibilities of Utah were demonstrated. No valley in all the arid regions surpasses this in its natural facilities for irrigation. The water supply comes from the various streams which issue from the Wasatch Mountains into the valley, and from the Jordan River which flows from Utah Lake; and the whole area of the eastern side of the valley is one vast net-work of canals and ditches. The development of this system of irrigation has accumulated moisture in the soil, so that

a far larger area is now cultivated than appeared possible in the early history of the valley. The kinds of crops have the greatest acreage in the following order: Lucern, wheat, hay, barley, potatoes, corn, rye, orchards, beets and vineyards. Other farm products consist of butter, honey, dried fruits, vinegar, cider and wine. The county has large interests in cattle, horses and sheep. The towns and cities outside of Salt Lake are: Big Cottonwood, Brighton, Bingham, Mill Creek, Granger, Hunter, North Jordan, Pleasant Green, Sugar House, South Cottonwood, the City of Sandy, South Jordan, Union and West Jordan. The principal smelters in the mountain country are located in the valley about ten miles south of the city, and are usually in full operation, smelting the ores of many mining districts in this State and a great deal that are brought from Montana, Idaho and Nevada.

SALT LAKE CITY

Salt Lake City, the capital of Utah, is the beautiful metropolis of the inter-mountain country. It was the first city to be settled in the western part of the continent. Passing over all ancient history, however, the vital interests of Salt Lake City, as they exist to-day, can scarcely be described in the limited space at our disposal in these pages; yet many of the salient facts relating thereto are at least indicated in the articles throughout this work, because, whether Utah is discussed as to its climate, agriculture, commerce, industries or social conditions, the interests of Salt Lake City play an important part in whatever aspect they are considered. The city itself has a population of about 60,000. It rests upon a gentle slope, facing to the South and West, at the base of the Wasatch Mountains. Its streets are 132 feet wide, and in the central part are paved with Belgian blocks and Utah asphaltum. They all run north and south and east and west. Five and six-story business blocks, built of stone and equipped with all modern conveniences, constitute the greater portion of the business part of the city. These are thoroughly metropolitan in design and appointments. Every line of business is well represented and a large jobbing trade is done, an extensive region in every direction being tributary to the capital of the State. Sixteen banks, with an aggregate capital of \$6,000,000, compass the financial requirements of the city. Natural Gas, obtained from the gas fields a few miles north of the city, is used for commercial, heating and lighting purposes. Salt Lake City is also a great educational

center. \$750,000 has been spent during the past two years on our public schools. The corps of teachers consists of the best native and imported talent, who have perfected a system on most approved lines, and fully abreast with the best educational centers. The poor cannot plead inability to educate their children on account of the expense of books and supplies, for these are generously furnished them gratis.

The city and county building, of Utah kyune sandstone, which cost \$900,000, is a model of architecture and a new and beautiful feature among our public buildings. Although we have one sewerage system, a gravity sewer is being constructed at a cost of \$300,000, which will continue to keep our city the healthiest in the United States, as the records for the past two years have shown it to be. Two rival electric street railway companies furnish rapid transit to all parts of the city and to the suburbs. One of them has forty-two miles of track and operates about sixty cars; the other has thirty-three miles of track and a proportionate equipment. The splendid water system is owned by the city and valued to-day at \$3,000,000. A number of fine hotels, with all modern conveniences, accommodate the traveling public. Salt Lake City possesses many unique features that are attractive to the tourist and are a theme of interest to the thousands who remain over at all seasons to examine them. In and out of Salt Lake City the great Rio Grande Western Railway has carried for many years the great bulk of the local traffic of the State; importing all the varied supplies for the wants of hundreds of thousands of people, and taking away train loads of ore, and a vast tonnage of bullion, grain, hides and wool, manufactures and general merchandise. During the period of financial and business prostration, which affected the whole country in 1893, there was no city which escaped its effects more than Salt Lake City. Not a bank closed its doors, and no business failures of any importance took place. In the graces of civilization, music, fine arts and literature, Salt Lake City is in advance of any other western city. Associations devoted separately to these matters not only exist, but flourish, commanding the attention and respect of the whole country and adding refinement to the many other advantages of life in the mountain metropolis.

The sanitary advantages of the thermal and medicinal springs which exist within the city limits have received much attention. The baths are an acknowledged cure for nervousness, catarrh,

rheumatism, dyspepsia and other diseases; taken internally the waters are a specific for a greater number of afflictions. Saltair Beach, on Great Salt Lake, the most magnificent salt-water bathing resort in the world, is located thirteen miles from the city.

It is in the volume and variety of its manufacturing interests that Salt Lake City maintains its principal importance. There are about one hundred manufacturing concerns in about fifty different lines, with a capital invested of over two million dollars, and an annual product of about three millions. Among the various articles of commerce manufactured are boots and shoes, show-cases, cigars, knit goods, soap, paper boxes, machinery and boilers, trunks, leather, overalls, clothing, fire brick, flour and other mill products, tents, carriages, beer, crackers, soda water, copperware, rope, woolen goods, silk, etc. There are also a number of foundries, printing offices, book binderies, turning shops, planing and wood working mills, stone yards, lime-kilns and big asphalt works, large cement works, saddlery shops, salt works, creameries, meat packing houses, an artificial ice factory, wire works, etc.

SAN JUAN COUNTY

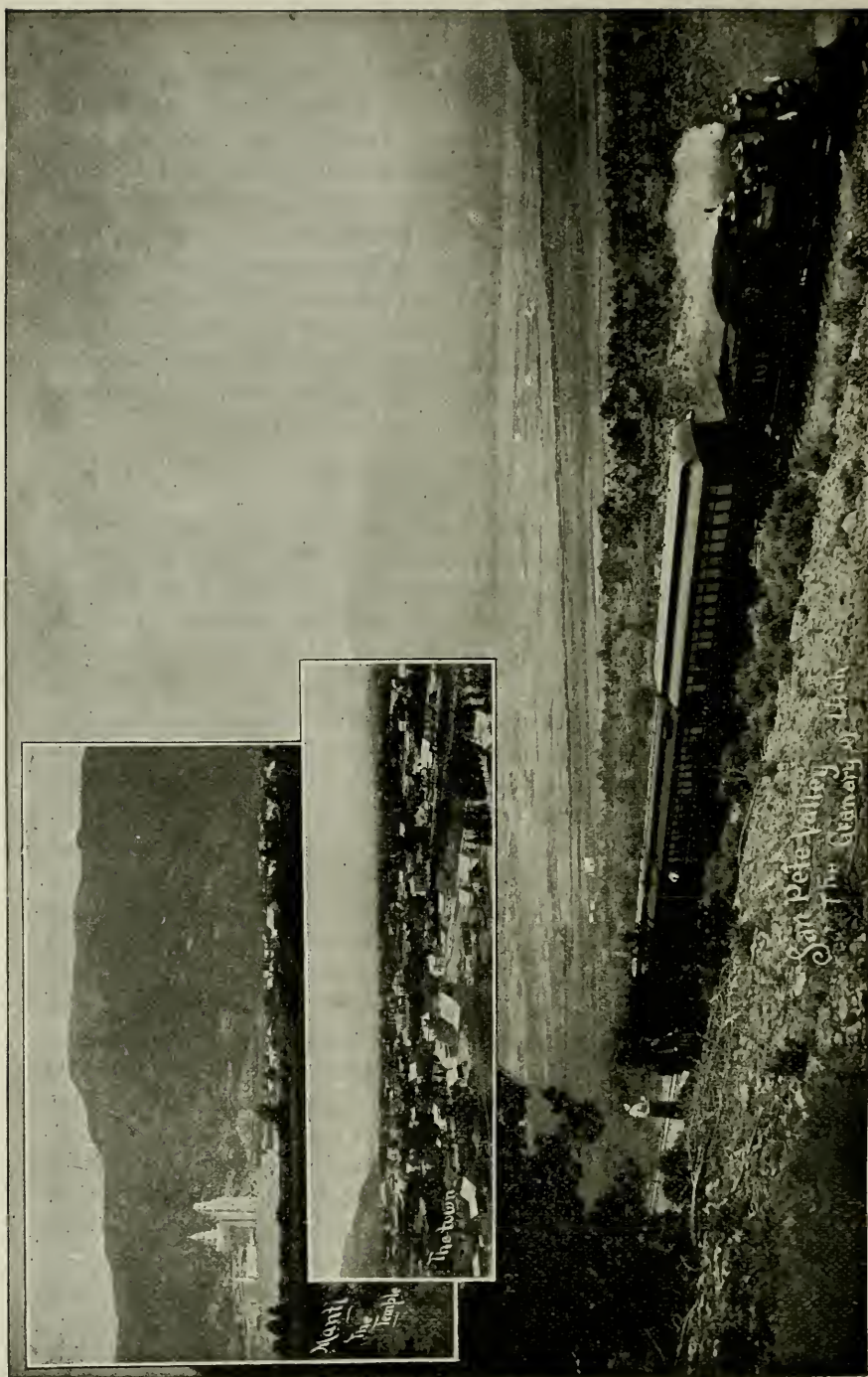
San Juan County occupies a vast district in the southeast corner of the State—a wild region, the last to be explored among the mountains of the West; yet, even here, settlement has already begun along the fruitful river bottoms, which drain into the San Juan and the Colorado. In the southern part of the county the high and mountainous region is well covered with long-leaf pine, cedar and piñon pine. The greater part of the county, however, consists of high plateaus, frequently divided by deep and impassable gorges cut through the soft sandstone to a depth of thousands of feet. The great San Juan River, half a mile wide, cuts through this country, with perpendicular cliffs several hundred feet in height. The river bottom is sandy and the stream sluggish, and owing to its sudden and extreme rises and changes in its course, it is almost impossible to utilize any portion of it for irrigation. A number of locations have been made, however, along its course, and much money has been expended in attempting to control its waters for farming; and at Bluff City some 2,000 acres are under cultivation, watered from a canal which has cost \$60,000 to construct. This would seem unprofitable farming, but it is absolutely essential to the residence of the settlers, who are extensively engaged in stock-raising. Five or six other running

streams traverse the county, and where these are not too closely shut in by the cliffs on either side of the river, are appropriated and used by small farmers. Notwithstanding its remoteness, the difficulty of securing water and its other disadvantages, the settlers have actually produced a fair supply of apples, peaches, peas, currants, grapes, sugar cane, lucern and all sorts of garden products, and are hopeful of still further increasing the volume of their agricultural output. The mountains have been but little explored for mineral, but large supplies of iron, marble, onyx, lime and lithographing stone, lead and copper, have been revealed; silver in lesser quantity, and in the Henry Mountains and the placers of the Colorado, gold has been found.

SAN PETE COUNTY

There is no more delightful or interesting valley in the whole State than San Pete, in the central part, and none which has maintained more continuous prosperity since the settlement of the country. It is about one hundred miles south of Salt Lake City, and the valley has an altitude of nearly 6,000 feet. The climate is delicious, bright and sunny, and it is probably the most fertile and productive valley in the whole inter-mountain region. San Pete Valley is the granary of Utah. There are 50,000 acres in this valley under cultivation, and twice as much more can be considered tillable. The price of land here is \$25 to \$50 per acre. Wheat and oats furnish the principal crops, the output being not less than a quarter of a million bushels per annum, year in and year out. Out of a population of 15,000 people, five-sixths of them are engaged in agricultural pursuits. The San Pitch River traverses the valley, affording with its beautiful tributaries an abundance of water for irrigation, although numerous drive wells furnish a still further supply. The importance of this county will be realized by its assessed valuation, which is \$4,429,600, and a very few statistics will make this still more clear.

It has 6,000 head of horses and mules, 1,000 head of cattle, 350,000 sheep. One wool company alone has shipped from Manti, the county seat, to Boston, during the past season, 1,500,000 pounds of wool, while the output of the county is about 4,000,000 pounds. The annual shipments of sheep from the valley have been from 30,000 to 50,000 head. Farms yield to the acre, forty bushels of wheat, fifty bushels of oats, sixty



SAN PETE VALLEY, THE GRANARY OF UTAH.
ON LINE OF THE RIO GRANDE WESTERN RAILWAY.

bushels of barley, 250 bushels of potatoes, while the garden products, such as carrots, beets, radishes, onions, etc., are prolific. Such fruits as apples, pears, plums, apricots, gooseberries, currants and strawberries grow to perfection. The streams, which dash down from the Wasatch Mountains in the east of the valley, not only supply the farms with irrigation water but furnish power for about thirty mills in the cañons; and the pine forests of the Wasatch and San Pitch Mountains make lumber plenty and cheap. Abundance of coal and fire wood exist in many places and are exported to the neighboring valleys. Reservoir opportunities are to be found in many places. The Rio Grande Western Railway runs the entire length of the valley, passing through Indianola, Milburn, Fairview, Mount Pleasant, Spring City, Ephraim, Manti, Sterling and onward to the south. Among the mineral resources of the county, fine prospects of silver and lead have been opened in the west mountains, while salt, gypsum, lime, ochre, asphaltum, fire-clay, brick-clay, alum, saltpetre and other minerals abound in the county. The county seat of San Pete County is Manti, settled in 1849, situated at the foot-hills of the Wasatch Mountains on the east side of the valley. Its population is 4,000, and it has fine school houses and a number of good stores. Manti is proud of its fish ponds and of its warm springs, its clear atmosphere and romantic scenery, and very justly claims to be a sanitarium. Ephraim is an important town in the county a few miles north of Manti, with a population of 2,700, and with nearly all of its homes built of solid stone. Spring City is again a few miles further to the north. Mount Pleasant is the second city of the county in importance. It has a bank, good schools, hotels, a newspaper, well built homes, flourishing farms and enterprising citizens. Fairview, Milburn, Chester, Wales, Freedom, Fountain Green, Sterling and Mayfield resemble each other in their principal attributes of thrift, and their inhabitants are happy and contented in the midst of plenty. No such thing as actual poverty, is known throughout the county. The average wealth of the citizens may not be great in money, but they all have the means of sustaining a comfortable livelihood and many of them are nabobs in a small way and are surrounded by all the comforts of life and many of its luxuries. Their lives are passed in peace and quietude, in the midst of fertile fields, surrounded by magnificent mountains, in a healthful climate. They have good horses and vehicles, good roads, great barns and haystacks,

orchards loaded with fruit, hives full of honey, cattle on a thousand hills, flocks and herds in the mountain vales; and if they are not happy the fault lies not in their temporal condition.

SEVIER COUNTY

This county lies south of San Pete and is almost in the center of the State. Sevier Valley and one of its tributaries, Salina Creek, represent the greater part of its area. There are 45,106 acres of tillable land already, but this will be largely increased during the coming year from the 8,000 acres set aside to the university fund. Sevier is an agricultural and stock-raising district, although many varieties of mineral exist within its lines. Along the course of the Sevier River are a number of towns of importance, and between them is a great extent of arable and cultivated land, all of which is irrigated, there being 206 miles of irrigating canals within the county. The land is extremely fertile, the usual cereals and grasses yielding well. Among the crops reported, some range as high as eighty-two bushels of wheat and ninety-seven bushels of barley to the acre. In the southeastern portion of the county the mountains are high, but among the peaks are frequent plateaus of great extent, whose summer range for cattle is not excelled by any in the State. The scenery among these mountain ranges is not so wild as it becomes further south, and is relieved by the view of large stretches of timber and pasture land. The county is entered by the Rio Grande Western Railway, whose present terminus is at Salina. The railroad from Salina to Richfield is already in the course of construction, and will be in operation by the first of June, '96. The county has been well developed, considering its remoteness, and the assessed valuation for 1894 was \$1,388,700. Building stone of excellent quality is said to abound in the foothills of the mountains, making it comparatively cheap for substantial homes to be built. The population is about 7,500. Richfield is the county seat, with 2,000 people. Like nearly all of the other towns in the county, it is situated in the midst of a rich farming district. The town has two steam planing mills, a steam flouring mill and a grain elevator, besides other important buildings. Like many other southern towns, the streets are lined with shade trees and streams of mountain water. In the town limits are found warm springs highly charged with mineral and medicinal matter. Before the settlement of the town, these springs were famous among the

Indians for the healing properties of the water. These springs are well patronized at the present time, and when an organized company assumes control of the waters, there will be nothing to prevent Richfield from becoming a noted sanitarium. Another principal town in the county is Monroe, with its nice residences belonging to wealthy cattle and sheep owners, and its industrial enterprises. Salina, the present terminus of the railway, is so called from the great beds of rock salt which exist in the neighborhood, and several salt works are engaged in a small way in this branch of manufacture. Good opportunities for further development exist in this direction. Mexican onyx, alum, coal and gypsum abound in the mountains near by. The streams in this county are well filled with trout and attract sportsmen in the summer season. A town in the southern part, Joseph, at the mouth of Clear Creek Cañon, where the soil is fertile and in the neighborhood of undeveloped mines of gold, silver and copper, has a large flouring mill, a small brass foundry, and a pork packing establishment. It is also supplied with water-works and is altogether a delightful town. Glenwood, east of Richfield, is a little town which is proud of its water-power, having two flouring mills and an ambition to possess other manufacturing concerns. Between Salina and Richfield, on the line now being constructed by the Rio Grande Western Railway, lie large tracts of valuable government land subject to entry under the homestead law, and large irrigating enterprises are already located near this property, which probably offers the best opportunity to settlers and investors of any locality in the State. Other towns are Redmond, Aurora, Sigurd, Central, Annabella and Burrville. At a place called Plateau a sanitarium was started two years ago, and a number of patients found great benefit in the soft, pure atmosphere of this mountain resort.

SUMMIT COUNTY

This county, lying east of Salt Lake County, embraces ten miles in length (from the Cottonwoods east) of the great mineral belt, on which is situated the Ontario, Daly, Anchor, Silver King, Crescent, Daly West, Morgan, and many others that are considered paying mines. This belt runs along and is the dividing line between Summit and Wasatch Counties, the valleys of each being farming and grazing lands, dotted with ranches, producing hay, grain and vegetables, while the hills afford grazing

ranges in summer for sheep, cattle and horses. When these mines can be worked at their full capacity, and other properties opened up, they will afford a livelier market for the products of the surrounding country. A large part of the profits of the paying properties has been expended in development work upon hundreds of locations on the great belt, one-half of the entire output or gross product having been expended in timber, roads, coal, hoisting and pumping machinery, mills, thousands of acres of timber, and everything that goes to make up a great plant, as complete in all its details as any in the United States. The mines of Summit and Wasatch Counties are not the only sources of revenue of these counties. Vast quarries of sandstone and brown stone, the most durable of building rocks, are found and being utilized in Salt Lake. Park City, Coalville, Wanship, Peoa, Kamas, Echo, and a number of villages contain the population of Summit County, which by no means depends entirely on its mineral resources. The assessed valuation is \$4,157,296, which, of course, does not include the value of its mines. The agricultural lands lie along the courses of the Bear, Weber and Provo Rivers, and the yield per acre is heavy. The water supply is greater than will ever be used.

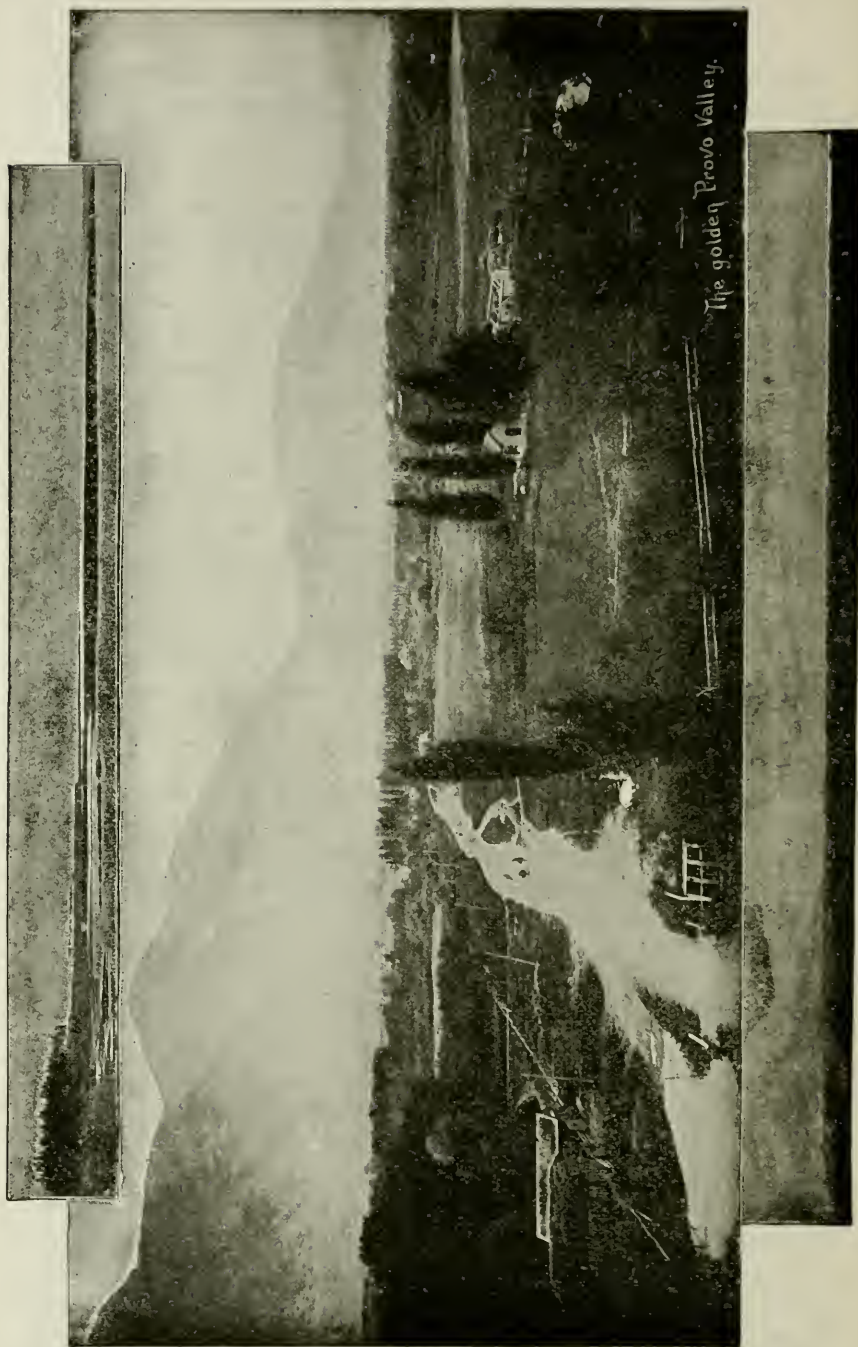
TOOELE COUNTY

This county, lying west of Salt Lake County, was one of the first to be settled in the State. It is among the largest in area, but a great portion is absolutely desert and may never be of any value whatever. Strange to say, however, the desert lands are all set aside by themselves in the western part of the county, while the eastern half is as beautiful and fertile as any land the sun shines upon. In the Tooele Valley, lying between the Oquirrh and Stansbury Mountains, are some 20,000 acres of tillable land, about half of which is cultivated and well watered, partly from mountain streams and partly from drive artesian wells, which yield abundantly in most parts of the valley. Cultivated land in this valley is worth as high as \$75 per acre. Among the chief farming products is wheat, which yields high returns to the acre; potatoes, running up to 200 bushels; lucern, fruit, etc. A considerable revenue is derived from the stock interests, wool, hides, beef and mutton being shipped in large quantities. Fruit is exceptionally fine in flavor, and the crops are large. Peaches yield as much as 300 bushels of handsome fruit to the acre. A fruit-canning and evaporating concern could do well in Tooele City; and

it has been suggested that a fruit-distillery would pay, owing to the cheapness of the fruit and the large quantities that are produced.

UINTAH COUNTY

Uintah County covers a large area, but the greater portion of it is occupied by the Uintah and Uncompahgre reservations. These reservations will no doubt be opened to settlement under the homestead law sometime in 1896. The two reservations combined cover an area of 6,207 square miles, or 3,972,480 acres. It is expected that 400,000 acres will furnish the Indians, who are peaceful and industrious, with their entitled share of the Government's allotment. About sixty-five per cent. of the remainder, 1,900,000 to 2,100,000 acres, is susceptible to cultivation by means of irrigation. The entire district is well watered by various streams, and through it extend the famous Strawberry and Duchesne Valleys, than which no richer lands exist. The reservations are best reached by way of *Price* Station, on the Rio Grande Western Railway. The northern part of the county, along the Valley of the Duchesne, is fertile, and sustains a flourishing farming and trading population. The principal town is Vernal, and for a considerable distance east and west of this settlement, along the base of the lofty Uintah Mountains, the farming land is all taken up, and is yielding excellent crops, but the district open to settlement for such purposes is cut-off on the south by the Indian reservations and on the north by the high mountains. These mountains afford a vast supply of timber, their northern flanks being the greatest forest region of the State. The scenic features of this county are not excelled by any in the State, although they are peculiar, the wonders consisting of the narrow rocky gorges, through which the waters drain from the snowy peaks of the Uintah Mountains. The population of the county is about 4,000. Gold, silver and lead ores are found in great quantity, and in the old Bullionville district is one of the greatest copper mines to be found in this country. This property is so vast and so rich that, even located as it is, eastern parties have spent considerable money on its development, and the ore has been taken by wagons 100 miles over the mountains to the railway, sent thence to Chicago, and profit realized on its shipment. It is in Uintah County, near Fort Duchesne, that the large bodies of gilsonite or asphaltum have been found, and shipments have been made to the amount of hundreds of carloads to all the



THE GOLDEN PROVO VALLEY, IN UTAH.
ON LINE OF THE RIO GRANDE WESTERN RAILWAY.

principal cities of the East, where it is in steady demand for the manufacture of varnish.

UTAH COUNTY

This garden spot of Utah, in the center of the State, and in the central and most fertile part of the Great Basin, is not alone a garden, but a most beautiful district in the mountain region. Utah Lake, its central gem, is bordered on every side by thousands of acres of richest farming land, while the towering peaks of the Wasatch and Oquirrh ranges form a background to it all. It has a population of 30,000, an area of 2,124 square miles. The mountains occupy 1,424 square miles, and the valley suitable for agriculture, 565 square miles. The area of Utah Lake is 155 miles. Of tillable land there are 342,400 acres, of which there are under cultivation 91,200 acres; 251,200 acres are capable of cultivation. The average elevation of the valleys above the sea is 4,500 to 4,800 feet; the highest mountain peak is 12,000 feet, being one of the highest peaks of the Wasatch Range. The assessed valuation is \$10,000,000. The total valuation of developed mining property is \$16,000,000; irrigation properties, \$3,000,000. The average valuation per capita is \$966.66. The county has no bonded indebtedness, but has municipal bonds of \$125,000, and school bonds of \$47,500. The county has 206.35 miles of standard gauge railway now in operation, traversing the county in every direction. The valuation of school property is \$321,921.

CITIES AND TOWNS—Utah County has sixteen thriving cities and villages. *Provo*, the county seat, is the largest, having a population of 6,000. It is beautifully situated on the east shore of Utah Lake, with broad streets, on either side of which flow clear streams of pure mountain water, bordered with shade trees. A few hours' drive takes one from the busy city into the grandest scenery in the Wasatch and the best trout fishing in the West. The scenery in the North Fork of the Provo River is unsurpassed anywhere, and Utah Lake invites the bathers on hot summer days. Provo is located on a great transcontinental railway, the Rio Grande Western. To all of the valley of Utah Lake and the vast territory of the south, Provo is the natural distributing point.

PUBLIC INSTITUTIONS—At Provo is located the State Insane Asylum—erected at a cost of \$300,000. The B. Y. Academy has

a wide-spread reputation as a seat of learning. The Proctor Academy, controlled by the New West Educational Commission, is conducted on a regular academic plan.

Provo has a complete system of water-works, and electric light.

LEHI is a thriving town in the north end of the county with a population of 3,000. Its principal industry is the Lehi Sugar Works and it is the nearest town of any size to the Camp Floyd mining district.

SPANISH FORK, PAYSON, SPRINGVILLE AND AMERICAN FORK are each thriving centers of large agricultural districts, and are principal points of shipment of agricultural products within the county.

AGRICULTURE—First of Utah County's developed resources are her *Agricultural Products*, in which she is among the first in rank of Utah's counties. A brief summary is here given of her cultivated land and the most important products :

	Acres Cultivated	Average yield per acre	Highest yield per acre	Average Price
Wheat	11,000	30 bu.	60 bu.	\$0.70 per bu.
Barley	8,125	32 "	76 "	.90 per cwt.
Oats	6,240	35 "	90 "	1.00 "
Rye	5,460	25 "	50 "	1.00 "
Sugar	2,200	13 tons	35 tons	4.00 per ton
Potatoes	3,000	300 bu.	840 bu.	.30 per bu.
Alfalfa	23,790	4 tons	10 tons	5.00 per ton
Tame and wild grasses	16,500	2 "	3½ "	7.00 "

Also 650 acres in Sorghum, 600 in Buckwheat, 230 in Flax, and 2,100 in Garden Produce.

Nearly all of the products are consumed within the State with the exception of barley, rye, potatoes and alfalfa. These find ready sale in the eastern market, a higher price being paid for the barley and rye than for the eastern prairie product. Large quantities of barley are shipped to Milwaukee, St. Louis and California, where it rates up to the best Canadian Brewing. Utah potatoes are known and in demand everywhere, while alfalfa finds a ready sale in all markets. Utah County wheat is a brighter, fuller kernel than the eastern products *as all irrigation products are*. It grades as No. 2 red in the market, but little of it gets farther away than Colorado. The demand in the inter-mountain region exceeding production, it is all consumed at home.

ORCHARD AND VINEYARD are considered together as to acreage, on account of their inseparability, because nearly every farmer's vineyard is a part of his orchard. Though occupying only one-third of the acreage, viz, 3,640, in the care given and in the value of its product, the vineyard stands far ahead, for many of the

vineyards were only planted recently and every care has been given in culture and the planting of the best quality of grapes. The product is equal to the best California grapes. One orchard of thirteen acres in the north end of the county has produced, for the last five years, an average of \$10,000 per annum, and a great many other horticulturists have recently planted orchards varying in area from five to 200 acres, with a prospect of ultimately attaining this same success. All kinds of apples, pears, peaches, plums, cherries, apricots and prunes grow here to perfection.

Utah County has 50,000 acres of as fine vineyard and fruit land as can be found anywhere, with a climate particularly adapted to the culture of the same.

LIVE STOCK—There are owned in the county, at present, something over 250,000 sheep. The average clip of Utah County sheep is seven pounds per fleece, making an annual production of 1,750,000 pounds of wool. Our factories only consume, at present, from 450,000 to 550,000 pounds of wool, leaving a surplus for shipment of 1,200,000 pounds. The manufactured woolen goods produced by the two woolen mills of the county, only using about one-fourth of the clip, sold for about \$180,000; \$250,000 is received annually for muttons shipped to Chicago; this gives an annual income from all the branches of the sheep industry of \$646,000.

There are owned in Utah County some 10,000 head of range cattle, and 6,500 head of milch cows. A small portion of beef cattle find an eastern market though nearly all are consumed at home.

The county possesses horses and mules, 9,600, hogs, 3,600.

IRRIGATION—One of the largest irrigation enterprises of this kind in the West, is that of the Mt. Nebo Irrigation Company, by which 25,000 acres of fine bench land will be irrigated. This land lies on both sides of the Rio Grande Western Railway, between Goshen and Eureka. It is particularly well adapted to fruit-raising and for lucern, potatoes and all kinds of grain. The waters of Current Creek, which rise on the east slope of Mt. Nebo, are stored in an immense reservoir six miles long and averaging nearly a mile in width, and holding over 1,000,000,000 cubic feet of water. The immense dam to hold back this vast volume of water was completed last November, and on the first of the year enough water was stored to irrigate 5,000 acres. From the reservoir the water is conducted through twenty miles of main canal to the land to be irrigated. Several thousand acres of land will be culti-

vated and over 100 acres of fruit trees will be set out here in the spring. The Company is making great efforts to get in settlers from the Eastern and Middle States to locate on the land, and they offer unusual inducements to bona fide settlers. The land is only a few hours' drive from Eureka and Mercur, the famous mining districts, and therefore a good home market is assured.

UNDEVELOPED RESOURCES—The first and most important of these is the undeveloped farming lands of the county. These amount to 251,200 acres, that are a desert without irrigation, but with irrigation are as productive as any land that man ever put plow into; therefore the consideration of our water supply is necessary first. The streams of the county flowing into the Utah Lake basin, have an average annual flow of 1,165 cubic feet of water per second, or over 36,510,000,000 cubic feet per annum, sufficient water to irrigate 838,150 acres of land. Artesian water is found everywhere at depths varying from twenty-five to 200 feet, with good constant supply, and force enough to raise the water twenty feet above the surface—nearly every farm has one or more. In the county only 91,200 acres are now irrigated, and the summer flow of the streams is claimed, but not used, in this irrigation and for power purposes. On two canals recently built the repairs are less than four per cent. With water for 832,150 acres, and only 342,400 to water, we have an over-abundant supply. At present most of the water goes to waste, as it comes chiefly when the snow is melting in the early summer, but natural reservoirs exist upon the upper courses of all the streams that can be utilized.

Next in importance are the *Mines and Quarries*, of which the following are found within the county: gold, silver, iron, lead, coal, asphaltum and bituminous limestone, ozokerite, slate, onyx, graphite, marble, granite, sandstone, antimony, cinnabar, sulphur, zinc, copper, serpentine, limestone and soda.

WASATCH COUNTY

The greater part of this county, in the northeastern part of the State, is occupied by the Uintah Indian Reservation, which, until opened by law in 1896, cuts out from settlement and occupation one of the best watered and fertile regions of the State. Only a couple of hundred square miles have remained for occupation by the whites, and these are almost wholly in Provo Valley, a beautiful elevated tract, traversed by the Provo River and some of its important tributaries. From a scenic point of view, Provo

Valley is as grand as any in Utah—the Wasatch Mountains, with their snowy peaks, towering along the western side of the vale. Heber, Midway, Charleston and Wallsburgh are the only towns in the county, the population being about 5,000. Provo Valley is too high for fruit-raising, but does well with wheat, oats and other crops. The assessed valuation of the county is \$1,106,588, but this is exclusive of its mining interests, which are very important, as the county adjoins Summit and takes in a portion of the great mineral belt on which the Ontario and other famous mines are located. The Park City mines have contributed largely to the support of the farming population of Wasatch County, and during all the period of Park City's prosperity, high prices have been secured throughout Provo Valley for every description of farming produce, while many of its town's people have been employed in the mountains in the production of timber and other supplies for the mines. Some of the big cattle owners of the State live in Wasatch County, and this, in time, will prove to be one of the most important counties of the State. In the southern part of the county there is a region exempt from the reservation, but it is wild and mountainous and consists mostly of bad lands. Yet, here a variety of hydro-carbon deposits have been found, and among them the famous mines operated by the Salt Lake Gilsonite Company, from which is produced a large proportion of the gilsonite and pure gum asphaltum of such value that it will bear a seventy-five mile wagon haul to Price Station, and thence be profitably transported to the eastern markets for the manufacture of varnish, and for other purposes.

WASHINGTON COUNTY AND SOUTHERN UTAH

A desire for definite information relative to southern Utah, has for some time been shown, notably by the Rio Grande Western Railway, and Salt Lake Chamber of Commerce. To elicit the desired facts, public meetings have been held in St. George, the county seat of Washington County, and these brought about the organization of a committee on statistics, with sub-committees on agricultural, horticulture, stock-raising, mining, and on merchandising and freight business; the sub-committees to report to the committee on statistics. The result of their labors so far is as follows:

AGRICULTURE AND HORTICULTURE—On the route between Muddy Valley, Nevada and Cedar City, Utah, there are twenty-

one settlements on the line of travel, having a population of from 6,000 to 7,000, with 10,320 acres under cultivation, and 8,130 acres being brought under cultivation. The cultivated land averages not less than twenty-five bushels of grain per acre, and in one settlement the average yield has been as high as thirty-eight bushels, while alfalfa shows an average of five tons per acre. This estimate does not include land to be irrigated by prospective reservoirs which will bring thousands of acres under cultivation.

The climate and soil south of the "Rim of the Basin" is admirably adapted to the production of all kinds of peaches, nectarines, almonds, plums, apples, pears, grapes, figs, pomegranates and other fruits. A large per cent. of what is now produced, however, goes to waste, for lack of transportation facilities. The county is also well adapted to the growth of all kinds of early garden stuff, such as radishes, lettuce, asparagus, celery, tomatoes, beans, cucumbers, melons, onions and Irish and sweet potatoes; also flowers of the choicest varieties, many of which bloom in midwinter. In the settlements along the Rio Virgin and Lower Santa Clara Rivers, the season for out-door gardening begins in the latter part of January, or the beginning of February. The climate of St. George and vicinity, with its delightful winters, often without a flake of snow, except what can be seen on the distant mountain, is unexceptionally healthful.

STOCK-RAISING—This industry has chiefly been considered in the matter of exports, and the figures given are for those parts of southern Utah, northern Arizona and southeastern Nevada, which would furnish freight to a line passing through St. George. The report of 1894 estimates that 30,000 steers, 5,000 horses, 50,000 sheep and 1,250,000 pounds of wool have been exported by the railroad.

MINING—There is an abundance of coal, iron, copper, gold, silver and lead ores, sulphur, ochre, alum, gypsum, mineral wax, and many other minerals, but the lack of cheap transportation makes it almost impossible to develop these prospects. Valuable properties that would yield millions, if they could be properly worked, are now lying idle. In Washington County 497 mining locations have been recorded.

WAYNE COUNTY

This county is situated in central southern Utah, watered by the Fremont River. It was the last county to be created in the

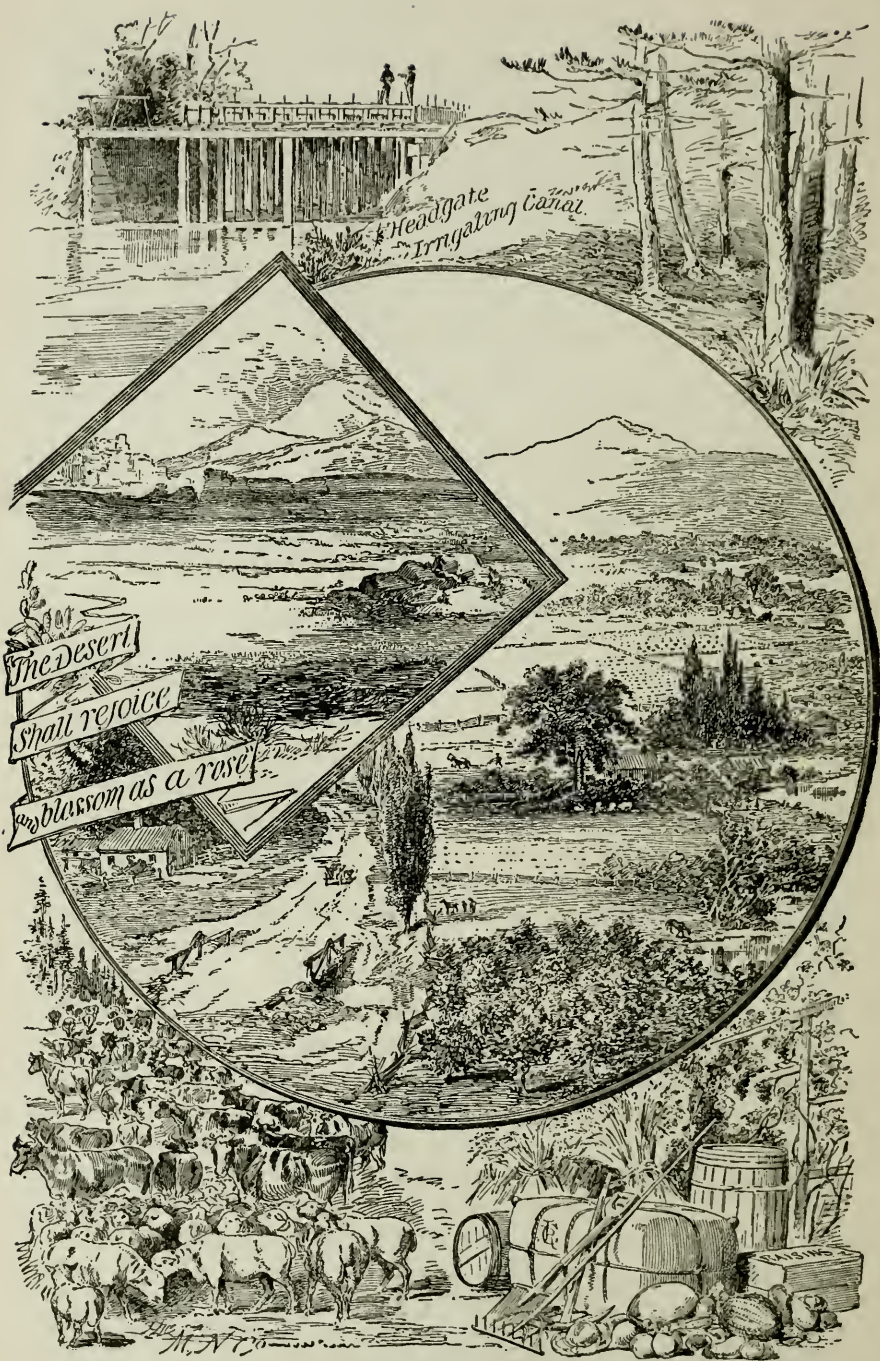
State. About 10,000 acres are under cultivation, but this can be doubled by taking advantage of the opportunities for water that exist. Much tillable land is open for settlement, and cultivated farms, with water-right and title, can be had at present, at from \$20 to \$80 per acre. Although settlement was recent, a great variety of products have been developed. Of the leading farming crops are sheep, wool, lumber, orchard products, etc. Oats yield sixty bushels to the acre, wheat fifty bushels, potatoes 650 bushels, and hay six tons to the acre. Mineral resources are varied; gold, silver and copper, great deposits of pure gypsum, sulphur and bituminous shale, while stone coal is found in a number of localities in different parts of the county. It is a fine place for fishing and hunting; the climate is delightful, the winters mild and summers cool. It is an ideal fruit country. They already have lumber and flour mills, with plenty of timber in the mountains, cedar and pine. The population is only about 1,000, but is rapidly increasing.

WEBER COUNTY

This county, the second in wealth and population in Utah, contains 500 square miles, and is diversified by mountain and valley, affording fine grazing land for horses, cattle and sheep in the mountain districts, and the valley lands are the richest in Utah, comprising as they do almost 200 square miles of Great Salt Lake Valley, lying between the Wasatch Mountains and the shore of Great Salt Lake, and watered by canals taken out from Ogden and Weber Rivers, and other canals supplied from the springs rising in the valley. East of the Wasatch Range and in the eastern part of the county, lies Ogden Valley, six miles wide and twelve miles long, rich and fertile. The natural wealth of Weber County may be divided up as follows: agriculture, horticulture, grazing or stock-raising, mines and mining, and great natural advantages of water-power and favorable location for manufacture.

In agriculture there has been uninterrupted success for forty years in the production of wheat, rye, oats, barley, corn, potatoes, cabbage, turnips, sugar beets, carrots, mangel-wurzel, sugar cane, celery, onions, tomatoes, cucumbers and every other product of the field or garden. Flax, hemp, timothy hay, blue grass, lucern, red top and clover thrive as in few places on the earth.

FRUITS—All that the temperate regions of the earth produce thrive here—apples, peaches, plums, greengages, prunes, apricots,



A HOMESTEAD, IN UTAH.

Siberian crab apples, cherries, currants, pears, quinces, grapes of many kinds, strawberries, blackberries, gooseberries, all of excellent quality, and from the above fruits the revenue to the inhabitants of the county is immense every year. There lies a great future for the county in the production of fruit. In the production of prunes alone there is no part of the United States better adapted to the growth of them than along the bench lands that skirt the Wasatch Mountains. The long, dry and warm season, with a clear sky throughout the entire summer, is well adapted to the proper curing of the prune, and at present 20,000 acres might be taken up and devoted to the production of this fruit. It would find a ready market north and east.

GRAZING—A great part of the area of Weber County is devoted to grazing horses, cattle and sheep. A rich bunch grass covers the sides of the high mountains and waste lands of the valleys, and on this the stockman's herds fatten throughout the year. The beef and mutton they produce are of the best and the wool clip from the vast flocks of sheep is immense. Cattle, hogs, horses, sheep and goats are abundant. The value of these in Weber County reaches millions of dollars at present, and there is much land yet that may be made profitable by placing new herds thereon.

MINES AND MINING—The attention of the inhabitants has not been turned to the development of mines in this county as in other counties farther south, still the mineral wealth of Weber County is great. Gold, silver, lead, copper and zinc are found in the Wasatch Mountains east of Ogden, and iron is found in immense quantities at many places near Ogden. Some years since, at Ogden, works were established, and iron of the most superior brand was produced. As there is excellent limestone for fluxing, these are advantages which in the near future insure the erection in the county of extensive iron works and rolling mills for the production of steel rails and boiler plate. Along the shores of the lake soda is abundant, and from the saline waters of the lake millions of tons of salt may be produced annually. Saltpetre or nitrate of potash is abundant on the south fork of Ogden River. It is in a very pure state and much of it ready to use in the manufacture of gunpowder. Alum and aluminum clays are found in immense quantities.

NATURAL GAS is found by sinking at almost any point between the city of Ogden, and the shores of Salt Lake.

SLATE—Granite, limestone, jasper, sandstone, oolitic limestone and soapstone, are found in quantities sufficient for any of the wants of man. Mica abounds in the hills east of Ogden, and a precious serpentine exists in Ogden Valley.

POPULATION—The population of Weber County numbers 35,000 souls. Of these, 22,500 live in the city of Ogden. The rest are distributed over the vast area of farming and grazing lands

and also in Plain City, Roy, Hooper, Eden, Huntsville, Liberty, Harrisville, Marriotsville, North Ogden, Uintah and Riverdale.

OGDEN

OGDEN, the county seat of Weber County, Utah, is situated at the west base of Wasatch Mountains, and from the beautiful slope on which it rests, it overlooks Great Salt Lake and its many islands. With a thrifty population, 22,500 people, and with paved streets, electric street-car lines, perfect sewerage, superior water supply and an excellent climate, it is at once the Mecca of the man who wants a home and happy bourne for him who seeks for health.

The Ogden public schools, as well as the kindergarten and denominational colleges, are not only the pride of the city but of the whole State. It has a free public library, a large number of literary clubs and associations, and one of the finest opera houses in the West.

Located at the western base of the Wasatch range of mountains, within nine miles of the shore of the Great Salt Lake, there are many places of rest and recreation. The great rocky wall to the north and east of the city, protects it from the cold blasts of winter, and the influence of the great body of salt water to the west, modifies the climate both in winter and summer, equalizing the temperature so that in winter it rarely falls below zero, and in summer seldom rises above ninety degrees Fahrenheit.

North of Ogden, nine miles distant, are the Ogden Hot Springs, whose waters, boiling from the crevices of the rocks, are charged with mineral and medicinal matter, making them valuable in the cure of many diseases. The waters of the Great Salt Lake furnish invigorating baths, much to be preferred to sea bathing.

The mountains around the city are filled with coal and mineral, iron, gold, silver, lead and copper, as yet undeveloped, although these mineral deposits are now attracting considerable attention.

That Ogden is destined to hold the same supremacy in the line of manufacturing, that she now holds in commerce, is to be proved within a few short months, for where cheap power can be obtained there will the manufacturing be done. The Ogden River, coming down the Cañon, furnishes a fall of several hundred feet in its course of six miles. This fall is being utilized now by the Pioneer Electric Power Company, that is building power works that will furnish 20,000 horse-power when completed, one of the most stupendous undertakings in the West. With this amount of power manufacturing plants, employing thousands of hands, can be operated at very small amount for power. Already a large number of factories are located in Ogden by contract, upon the completion of this power.

West of Ogden are the gas fields, the southern end of which have been tapped to furnish gas to Salt Lake City.

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